TREVELYAN PRIZE ESSAY.

ANALYTIC ORTHOGRAPHY:

AN

INVESTIGATION OF THE SOUNDS OF THE VOICE,

AND THEIR

ALPHABETIC NOTATION;

INCLUDING

THE MECHANISM OF SPEECH,

AND ITS BEARING UPON

ETYMOLOGY.

BY

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PREFATORY.

ALTHOUGH the Essay following owes its form to the prizes offered by Sir Walter C. Trevelyan, A.M., the material has been accumulating during a number of years, in connection with Ethnology, speech being an important characteristic of man. But in taking cognisance of speech as it occurs in nature, it is found very different from its representation in books, as we learn when German, French, and English are really compared. It was considered necessary to record such vocal phenomena as we had observed, and out of this a notation has arisen which those whose knowledge of languages is based on books may regard as too minute, whilst those who are familiar with languages we have heard but casually, will probably discover that our chief error has been a want of nice discriminating powers. But whilst it is the duty of the explorer to record the minutest phases in a given language, the natives themselves will determine how far these distinctions are to be expanded or curtailed when represented in an alphabet.

Our "Latin Pronunciation" grew out of the question of alphabetic notation, and in that we determined that if the Roman Alphabet is used as a basis, the letters must have their Latin power; and this is the view of others, as will appear in the course of our Essay. Unfortunately, there are many who admit the justice of this, as long as they suppose that Latin was pronounced as they pronounce it, who change their view when there are discrepancies, and are ready to pull down the structure of Latin etymology and prosody to their own barbarian level.

When the ancient testimony on the power of a letter is undisputed, an argument is used which satisfies most literary people, namely, that the modern corruptions may have existed in ancient times. But whilst we grant the justice of this supposition (§ 131,) we cannot allow ourselves to depart from the letter of the ancient grammarians to theorise on *unwritten* dialects for the purpose of vitiating the normal form. The Tuscan *hasa* for *casa* has nothing to do with the power of *cay* in the written dialect, and he who said *bufalo* for BUBALUS, was using *f* where another used *b*; he was not pronouncing *b* as *f*, but using an unwritten form, like a Roman saying *piano* for PLANUS, or an Englishman pronouncing the same PLANUS in the two modes *piano* and *plain*.

In January and February, 1854, there were four Alphabetic Conferences held in London at the house of Chev. Bunsen, in which fifteen scholars and scientists participated, but they arrived at no common conclusion. There was no difference of opinion in regard to the power of nearly all of the consonant letters of the Roman alphabet; yet we have not followed them in regard to *k*, *v*, *w*, *y*, *z*, in which they sacrifice and corrupt a fifth of the Latin alphabet.

The new Laws of the Mechanism of Speech, and the Physiology and Physiognomy of Words, as exhibited here, we believe to be the true basis of etymology, and they will be taken up and expanded hereafter into an educational series on the Philosophy of Etymology, Affixes of the English Language, &c. At present there is no better proof of the low condition of linguistic education amongst us, than the use of Deacon (more correctly Diacon) Trench's books in our schools and colleges, where they have been introduced by illiterate admirers. These books are equally popular in England, notwithstanding the more accurate views of scholars like Ellis, Garnett,* Guest, Key, Latham,† Wedgwood, &c.

Although we have furnished to the phonetic periodicals several articles on etymology as a matter of speech rather than of spelling, we do not belong to the "reforming" class, and we are not aware that we have hitherto expressed an opinion of phonotypic English. Intent on a literary, rather than a philologic view of the subject, Trench and his imitators have overlooked what we consider the strongest argument against it—though not a valid one.

The authors animadverted upon have been those whose books were at hand, although many others contain similar views, and nothing farther has been intended than to represent each author in quotation, as he has chosen to represent himself. The supposed errors of those who have taken some pains to be accurate, have not been alluded to. Thus a careful author might, from a knowledge of several European languages, limit the number of possible consonants to twenty or thirty, and conclude that a surd cannot follow a sonant consonant in the same syllable, although contradicted (§ 682) by the Hungarian words for *one* and *four*.

The circumstances under which the following pages were printed, have caused defects in the typography which are quite independent of the notation. The several sets of type used did not combine well,—some were wanting which are sufficiently accessible in large offices, and the compositors, unaccustomed to technical matter, and unacquainted with foreign alphabets, had much difficulty in understanding the manuscript. Mechanical corrections were difficult to make, and often resulted in typographic inaccuracies, so that it was thought best to be satisfied with an approximate regularity, rather than risk the dropping out of an accentual, or the turning of a letter which had been inverted intentionally.

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* We regret that so great a philologist should have allowed his prejudices to make him unfair in his review of Webster and Richardson, in which he condemns the errors of the former, and palliates the greater errors of the latter. Webster was the first lexicographer of English who placed definition and etymology on a proper basis; Richardson was not competent, even to follow, in either. Webster (apart from his erroneous semitism) saw the value of oriental etymologies, and he thought Tooke an unsafe guide. Richardson despised oriental etymologies, and adopted Tooke's errors—but seemingly not to his discredit, for the Quarterly Reviewer, so free from "narrow-mindedness," and of such "vast erudition, masculine energy of diction, and scathing sarcasm," says that Richardson's defects "are not so much chargeable on himself, as on the guide whose dicta he implicitly follows."! We quote this, and the last sentence of § 320, in vindication of Webster,—preferring fairness to sarcasm.

† The first to call attention to the affinity between French *o* in *oie* (§ 213,) and English *w* in *now*.

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THE following corrections, &c., may be made: § 52, l. 5, transpose *sh* and *sk*. § 167, note *c*, read *constructed*. § 201, l. 4, for *cay* read *gay*. Heading of § 312 read (§ 237). The arrangement in § 577 was published by us in the Linnæan Record of Pennsylvania College, for June, 1846. § 649, l. 4, read *probably*. § 669[7], for *t'* read *t'*. § 681[4], omit *t*, leaving its mark stand. § 721, put *Malay* in parentheses. The heading (b) of § 405 has been turned into (q) in some copies. The Hottentot cluck on a *t* basis (§ 447) is the only one we have heard in nature. Page 402, line 2, omit *or*. § 19, l. 5, for *e*, *i*, read *ɛ*, *i*. § 724[1], the third letter is *ɛ*.

§ 568. According to Smith, in Robinson's Palestine, vol. 3, p. 90–1, Boston, U. S., 1841, "The Hamzeh is in no sense a breathing. . . . When it occurs in the middle, or at the end of a word, the voice must be entirely stopped before it can be pronounced." This valuable Appendix has been omitted from a later edition.

§ 639, *note*. According to Dr. L. Loewe, (Dict. of the Circassian Language,) "the pronunciation is so difficult, that even the most distinguished linguists find it hard to imitate the sound of a syllable as uttered by the mouth of the Addee-ghey people." Klaproth says it is one of the most difficult in the world to pronounce, no alphabet being competent to represent it accurately; and that it has a clacking of the tongue, and several throat consonants, which a European cannot reproduce.

ANALYTIC ORTHOGRAPHY;

ADDITIONAL CORRECTIONS.

§ 18, l. 5, phenomenon. § 25, l. 5, spiritûs. § 121, for *or* read *ot*. § 125, l. 10, for *would* read *could*. § 137, l. 1, put) after period. § 171, l. 5, read luck⁹. § 253, l. 2, read raIsin*. § 360, l. 7, read Castrén. § 398, l. 5 of note, read (p. 21) and place the accent of "region." after e. § 538, the a in the table wants the aspirate mark. § 613, l. 5, first word, read 'bon. § 618–19, l. 2, read dA,; line 12, for 'a read w,. § 634, the initial of the word for *brow* is the same as that for *eye*. In the word for *shirt*, for ɔ read ɪ. § 661⁶, for 7 read ˀ. § 667², the *outer* branch of inverted ʁ should have been removed. § 678⁵, for r read ɾ. § 680¹⁰, invert the ʏ. § 683⁵, the nasal mark belongs to the vowel. § 684⁸, third form, for ɛ read χ. § 685⁸, for * read †. § 687⁶, the first vowel has an acute accent. § 688, read *Coptic***, and in the note **Memphitic. § 688⁷, read ††, and in the note †† In our MS. § 689⁸, for ‡ read ‡‡, and ‡‡ in the last note. § 696, the five asterisks should be ‖. § 697⁷, place " over ʟ. § 699¹, insert initial ă. § 702³, văhă. The mark of ⁹ belongs to v, and also in 704³ and 707⁴. § 704⁷, for ŭă read ăŭ. Place " over v. § 705⁸, place a grave accent over the first vowel. § 709⁵, the second letter is ɔ. § 713⁵, after ĭ insert s. § 714–16, the k is for c. § 659⁹, for p read n.

The final aspirate in § 702–3 is that described in § 563. It is not indicated in all cases, but is assigned to one of the forms (§ 720⁶) of Chinese. It is remarkable that the opposite Chinese phase (§ 564) should have been indicated as occurring in the word for *seven* in two French dialects (§ 669–70) taken independently.

THE PUBLISHERS of this Volume are in no manner responsible for the typographic execution of these pages, the sheets having been furnished to them from the forms as prepared for the "TRANSACTIONS," of which they form a part.

S. S. H.

CHAPTER XI.

§ 229, Mutation or anathesis. 231, Precession. 232, Recession. 233, Transcession. 234–6, (314,) Anallaxis. 237, (312,) Metallaxis. 238–43, Affinities of the vowels. 245, Marks of mutation. 246–56, Examples of intermutation. 257–8, Vowels often unchanged. 259, Vowel relations irregular. 264–5, Commutation. 266–72, Permutation.

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ANALYTIC ORTHOGRAPHY;

An Investigation of the Sounds of the Voice, and their Alphabetic Notation,

BY S. S. HALDEMAN.

(From the Transactions of the American Philosophical Society, Vol. XI.)

CHAPTER I.

COMPARATIVE Grammar cannot acquire a scientific shape until it discards the pedantic fetters of orthography, and writes all languages according to one system; for things of a kind admit of a just comparison only when compared by the same standard. In this respect, philology is in its infancy, and we place difficulties where none are to be found in nature.—*Rapp*, Grundriss der Grammatik des Indisch-europäischen Sprachstammes, 1855, p. viii.

§ 1. *The present tendency of science* is to adopt standards of universal application, and it is usual for learned societies and associations, to have a permanent committee of research, consultation, and correspondence, with a view to bring about a uniformity of weights, measures, and coinage.

2. *The advance of linguistic science* demands a uniform nomenclature and notation for the phases of speech, so that the same syllable may be written in the same manner, wherever there is occasion to use it, just as every known plant and insect is recognised by a uniform Latin name among all who are familiar with botany and entomology.

3. *Although the want of a uniform mode* of representing languages is felt as an urgent necessity, they have not been provided with a letter for each sound; whilst chemistry, (which is not studied by one in a thousand,) has a perfect notation, an alphabet of dotted or marked letters, to represent some sixty elements; and, as it were, spell all their ascertained combinations.

4. *Berzelius did not base his symbols* on his native Swedish, but upon Latin,* without even looking at the inconsistent and cumbersome notation which his predecessors of the last century had used, and which may be seen in their books, or in the Encyclopædia Britannica, as late as the year 1798.

* "Berzelius has properly selected them from Latin names, as being known to all civilized nations."—*Turner's Chemistry.*

5. *Alphabets of hundreds of characters* have been cut for Arabic, Sanscrit, and Greek;* the Greek vowel *iota* requires the fifteen types ι, ί, ὶ, ἰ, ἱ, ῑ, ῐ, ῒ, ῖ, ῗ, ἰ, ἱ, ἴ, ἵ, ἲ, ἳ, ἰ̃, ἱ̃, the general alphabet proposed by S'uñic', (*Schunjitsch* in German letters,) requires seventy-two vowel modifications; astronomers and mathematicians have a sufficient typography, and the complicated notation of modern music can be set up in detached types.

6. *The chemic alphabet* came from the hand of a philosopher; English writing has been controlled by the literary and superficial, as distinguished from the scientific public; the alchemists rather than the chemists—astrologers rather than astronomers—linguists like Trench, rather than philologists like Rapp, who "settle" questions in spelling, pronunciation, and grammar, according to English analogies, without knowing what these analogies are.†

6 *a*. *Goold Brown writes* a ponderous "Grammar of English Grammars," after consulting about four hundred authorities, but instead of producing a cyclopædia on the subject, the work is worthless for deciding questions which depend upon general principles. With him, (and probably nine-tenths of his four hundred grammarians,) *awe* is a tripthong, beginning with *a;* and with Trench, (in lectures, and therefore clear of spelling,) "*ant* and *emmet* were originally different spellings of the same word," (as "*gaol*" and "*jail*," or "*plough*" and "*plow*" are at present,) but he does not tell us whether the "same word" that "ant" spelt, was *emmet*, or the reverse, "emmet" spelling *ant*.‡

6 *b*. *A college student asserts*, in a published communication, that one of his professors

* "Where ligatures and abbreviations abound . . . 750 boxes are required for the different sorts of a fount of Greek . . . It must, however, be observed, that almost 300 of these sorts are the same, and have no other difference than that of being kerned on their hind side; for we remember to have seen Greek with capitals kerned on both sides."—Printers' Grammar, 1797, p. 242.

† *This Essay owes its form and matter* to the following circumstances. In the year 1857, Sir Wm. C. Trevelyan, A. M. (Oxford,) of Wallington, Newcastle-on-Tyne, offered two prizes for essays on a Reform in the Spelling of the English Language, to contain, among other features, an Analysis of the System of Articulate Sounds—an Exposition of those occurring in English—and an Alphabetic Notation, in which "as few new types as possible should be admitted." The last requisition has, in a few cases, resulted in a double notation, one of which represents the author's preference in a new form of type, the other being a form in use, but not approved. The investigation was made from a natural history point of view, and the results are here presented. A Report is yet to be made to the American Association for the Advancement of Science on the Subject of an Alphabetic Notation for exotic Languages. Suggestions and criticisms are solicited towards this end, to be addressed to the author at Columbia, Pennsylvania.

‡ Similarly Webster, the chief of English lexicographers—"nations differ in the *orthography* of some initial sounds. . . . Thus the Spanish has *llamar* for the Latin *clamo*." This is a difference of "orthography" in the same sense that English "knee" differs from the Saxon "knee." People who hold such views must consider *tear tear, sow sow, bow bow, wind wind, wound wound*, as identic, because they do not "differ in the orthography;" whilst *convey inveigh, receipt deceit, noun renown, sprite sprightly, expatiate spacious*, pre*sistance -ency*, con*sistent* re*sistant*, must be considered as wanting identity.

says pronun-si-ation, another pronun-shi-ation, and there is probably no orthoepist who has determined the theoretic form by investigating the laws of *speech* which govern such words. Richardson, Eng. Dict. Prelim. Essay, § II. p. 17, tries to split a simple element (*ng* in *sing*,) in citing Gothic "ga-g-gan" Anglosaxon "ga-n-gan" *to go;* Regnier* does the same for the German past participle "ge-sun-gen," and J. E. Worcester also, in the word "haidin'gerite" for hai'ding-erite.

7. *In Professor Fowler's English Language*, (chiefly Latham's Book,) and under the head, "Combinations not in the Language," he states, that English has "but few rough-breathing or *true aspirates* in comparison with the *Greek*, and those mostly confined to compound words like *off-hand, with-hold, knife-handle.*" Such combinations as *th-h* and *f-h* are not Greek, nor do *th-h* constitute *an* aspirate. This statement is probably due to a misunderstanding of a false view of Greek φ, (and why not of θ, χ also?) confidently given in Donaldson's New Cratylus. The uneducated sometimes assert, that there are but few vowels in Arabic and Hebrew; and Professor Fowler seems to think it remarkable, that there are syllables "in Choctaw like *yvmmak*, in the Welsh like *yspryd*. . . . Combinations like these are altogether undesirable." This is a very roundabout, but strictly literary way of saying that he considers the English syllables *hum* and *us* objectionable, since but few of his readers could know the pronunciation of the words quoted. His view of quantity, (which is subject to the same phases in all languages,) is strangely perverted. "If the quantity of the Syllable be measured, in the Classic mode, not by the length of the Vowel, but by the length of the Syllable taken altogether, *see* in *seeing*, being followed by another vowel, is short." Compare Latin hērōēs and English hērōes, or illēus and illĕus.

7 *a*. *In the Latin Grammar* of Prof. C. D. Cleveland, A. M., it is stated that "A letter is a *mark* of a sound," that these *marks* of sound or "Letters, are divided into *vowels* and consonants," and that the *mark* he calls "A vowel, is properly called a simple *sound*." According to this, Comanche has neither vowels nor consonants, French has not a peculiar *u*, *y* is a long "vowel," and *o* is a round one.

7 *b*. *In one of the widely spread* school books of R. Sullivan, LL. D., T. C. D., it is stated that "A letter is a character or *mark* used in writing words. . . . Letters are divided into vowels and consonants. . . . A *triphthong* is the union of three *vowels* into one *sound*, as *ieu* in ad*ieu*." "In every syllable there must be at least one vowel." It can have but one, and may have none. "Ness denotes the prominent or distinguishing qualities. . . . Ness properly means a promontory." "For the sake of euphony, IN, in com-

* Traité de la Formation des Mots dans la Langue Grecque, Paris, 1855, p. 138.

position, usually assumes the form of the initial letter of the word to which it is prefixed; as in *ig*noble, *ig*norance," &c.

8. *Whilst such literary ideas* have tended to corrupt the judgment of every native investigator of a badly written language, the student in geometry and astronomy is not trammeled with the magic and astrologic value of triangles and squares; the chemist sweeps away the rubbish of alchemy; musicians construct a system adapted to their wants without regard to the features that would render a previous imperfect system unintelligible without special study; mechanics and manufacturers have their standards and gauges; even the cooks of the civilised world have a uniform nomenclature; and in his way Mr. Soyer has a more philosophic mind than Deacon Trench, the modern painter is a better observer than the poet, George Cruikshank a better delineator than Charles Dickens.

9. "*A people will no more quit their alphabet* than they will quit their language."—*Trench.* Yet Anglosaxon, (which will be called *Anglish*, for a reason given in § 255,) and **black letter** disappeared; old letters were dropped, (as those for the sonant and surd *th*, þ, and the Danish vowel *y*,) improper new ones were introduced, as Belgian (a term used in preference to *Dutch*,) *k*, *w*, *v*, *y*, *z*, Latin *q*, *x*, (not used in normal Anglish,) a peculiar unauthorized *j*, probably Norman; and *every one* of these letters, *th*, *th*, *k*, *w*, *v*, *y*, *z*, *q*, *x*, *j*, was ignorantly foisted upon English, by people who had so little idea of spelling, that the same word was often spelt in several ways upon the same page.* Of these ten novelties, one half, (*k*, *q*, *x*, *th*, *th*.) were unnecessary, and the remainder, (*j*, *v*, *w*, *y*, *z*,) came in with false powers. Forms of letters have varied, long *s* has disappeared, and ct has replaced a form ct with an arched line of union. Spelling has varied materially and often for the worse, and the modern page differs in the use of capitals and italics.

10. *Duponceau objects* (Tr. Am. Phil. 1818, p. 237) to "the masquerade dress under which men of more fancy than reflection would disguise the immortal thoughts of Milton and Shakespeare, so that the eye would no longer at once recognise them," &c. But this disguise has been already cast over them. Milton was born in 1608, and his Paradise Lost presents a very different appearance from the first edition of 1667. The following specimen of Shakespeare (in modern typography) shows, that (like Duponceau's "vision") his† spellings of 1623 have "melted into Ayre:"

* The following examples are from Holland's Plinie, 1635, some of them from contiguous lines—*we wee, she shee, he hee, pul pull, wil will, ten tenne, sun sunne, moon moone, stars starres, els else, bin beene, physitian physition, whelps whelpes, shels shells, clee clawe, oisters oysters, meremaids mearmaids.* Parkinson (1640,) has *poppy* and *poppye* in the same line, and Jonstonus (1657,) uses *eels* and *eeles.* Chaucer has *egre eyer, malgre maugre, lest list luste, lewed lewde, knen knene, hackenaie hakeney.*

† "These are not *his* spellings; he edited no play, and the Tempest was not even published in his life time. They are printer's spellings, probably more regular than his." MS. note of A. J. Ellis.

. . . . . into thin Ayre;
And, like the baselesse fabricke of this vision,
The Clowd-capt Towres, the gorgeous Pallaces,
The solemne Temples, the great Globe it selfe,
Yea, all which it inherit, shall dissolue,
And like this insubstantiall Pageant faded,
Leaue not a racke behinde.—*Tempest*, Act 4, Sc. 1, 1623.

11. "*Here then are England and Wales*, with their sixteen millions of people, with nearly *eight millions* unable to write their name, and not less than five millions unable to read their mother tongue."* In the United States, even in the states which supply the education at the expense of the treasury, the number of illiterate people is very large. The time for attending school is limited among the poor, and schools are rare where the population is sparse, so that minds of a high order may remain undeveloped. Energy indeed may overcome great difficulties, but this may form no part of a mind of high generalising and inventive powers.

12. *The millions of freemen* kept in mental and moral darkness, instead of loving an orthography, know not what it is, whilst the great mass of readers despise it;—some thinking it a trick of the schoolmasters to extend the period of tuition—whilst others regard it as a means of separating society into a lettered and an unlettered class.†

13. *A child aged thirteen, who can read*, has within a few days spelt as follows:—b-a-o-t *boat*, (not knowing the position of the "silent" letter,) l-oo-k, l-o-k, *lock*, (putting "*double*" before *o* is not suggestive of a different sound,) m-u-r-o-u-r *mirror*, ("*you*" and "*eye*" are equally unsuggestive of the first vowel of this word,) c-h-i-r *chair*, (saying c-h-ai-r instead of c-h-a-ai-r.)

14. *Among the most mournful* of theatrical scenes, such as are most likely to call up feelings akin to those of the poet who sung—

Srdce moy szarcze ach hui deos sadnissa!
Kard man hiort ag cuige diz sathinassus?

are those in which an illiterate character slowly spells out a letter, commencing "D-ee-r C-u-r," and is greeted with a shout of laughter from people who would spell *cur* (which has a cay sound) with a consonant called *see*, and a vowel called *you*, and then pronounce this s-you-r as *cur*.

* British Q. R. Nov. 1846, Art. VIII., p. 472, quoted in Ellis's Pea, 2d ed. p. 56.

† "It is better for criticism to be modest . . . till the pardonable variety of pronunciation, and the true spelling by the vulgar have satirized into reformation that pen-craft which keeps up the troubles of orthography for no other purpose, as one can divine, than to boast of *a very questionable merit as a criterion of education*."—*Dr. James Rush*, Philosophy of the Human Voice, Philadelphia, 1833, p. 383.

15. *Three millions of people* can support a literature in all its branches, from primers and almanacs to encyclopædias and universal histories. This may be given in round numbers, as the amount of population supporting Danish, Swedish, and modern Greek; and about a million Albanians are divided upon three alphabets, the Italian, Greek, and a native one of 52 characters, more different from the Greek and Italian than these are different from each other. A journal is considered to be well supported when 2,000 copies can be disposed of, and in the Book Trade, works devoted to special branches of knowledge are often printed in editions of 250 copies, not as rarities for bibliomaniacs, but to supply the probable demand.

16. *When more rational modes* of orthography arise, there will therefore be much danger, not from the dearth of books, but from the multiplicity of alphabets which will be proposed—and it is possible that there may be half a dozen in the British Islands, and twice as many on the Vesperian side of the Atlantic.

17. *There is a politic reason* for a reformed orthography. The age demands it, and the population is moving steadily towards it, unconvinced by platitudes on the Study of Words by those who have not exhibited that acquaintance with the science which the discussion of its principles demands. The reform should be undertaken with all the aids that science and scholarship can command. Let the fields of philology, physiology, epigraphy, and living speech be explored, and let an alphabet be erected, so free from those national perversions which national vanity might wish to be legitimate, that no one will have the power to say—"They are only exhibiting the dress of their vernacular,"—"This letter has a purely English power,"—"That is a French corruption."

18. *Let the alphabet be capable of enlargement*, to render it adaptable to all languages, whether English, Italian, or Tahitian, and equally suitable for the dialect of the peasant and the tables of the comparative philologist; and let it not run counter to the great etymologic and metric principle which requires that all records, statements, and comparisons, shall be made in symbols, each of which shall represent the same phenomena.

19. *The great success of phonography* shows that not a single concession which is false in principle, need be made to conciliate English sympathies, (§12,) or to preserve so-called English analogies; and it would be unkind and ungenerous to all nations having the allied pairs of vowels in *they them, marine mariner, he his*, were the attempt made to assign characters to them as diverse as a, e, for the former, and e, i, for the latter. The unlettered five millions *feel the affinity* between the vowels of *break* and *wreck*, who would see no more fitness in the dissimilar forms a, e, than the chemist finds in the cumbersome notation of the alchemists.

20. *It is admitted by Mr. Ellis,* (Plea, 2d ed., 1848, p. 130,) that his English alphabet of 1848 would injure the visible etymological connection between Italian and Latin; "but *we* should as much *injure the visible etymological relation between English and Latin* by any other mode of spelling." But as Italian *is* nearer to Latin than English is, a proper orthography would show it. English has no right to *seem* to have a certain resemblance to Latin which it has not—to pretend, by spelling *secure* with an *e*-character, that it is nearer to the Latin sēcūrŭs than is the Italian *sicuro.* § 256—8.

21. *The English consonant th,* and the vowels in *at, up,* not being Latin sounds, should not be represented by Latin letters, but by new or modified forms, so that the eye could detect strange or unlatin elements in an unlatin language, as readily as the eye detects Polish by its crossed *l,* and distinguishes Portuguese from Spanish by a nasal sign, which also separates Polish from Bohemian, as it should separate French from Italian, to exhibit its affinity with Portuguese.

22. *German should not exhibit* a seeming resemblance to English in *th* for *t* in *theil,* (a part,) a cognate of *deal,* because English *th* is not wanted in German; nor should French have *th* (for Greek theta) in *thême,* where the English are entitled to it. The Welsh, having the *f* sound, should not write *ff* for *f* of the twelfth century, and having English *v* (for which 'w' was used in the twelfth century, and 'u' in the thirteenth) they should not write it with the *f* character—although this is a trifling error compared to that of using the Latin V (*way,* § 106) character for the English *vee* sound. In short, Welsh, German, Latin, English &c. writing should resemble when the words are alike—when different, it should dissemble.

23. *If we can pronounce French and Polish,* we can appreciate the relations between the following pairs, in which the Poles have sought to secure an identity in the *word* rather than in the *sign*:—bécasse, *bekas,* (snipe;) paragraphe, *paragraf;* paralytique, *paralityk;* page, *paz';* bagage, *bagaz';* parasol, *parasol;* parapluie, *parapluj,* (umbrella;) Triest, *Trst;* German *meister,* Polish *majster;* English *Mr.,* Bohemian *mistr.*

24. *A physiological basis* has been advocated, and the alacrity with which the Standard Alphabet of Professor Lepsius, (London, 1855,) has been adopted by various missionary societies, seems to be an evidence in favour of such a basis. Unfortunately, the acknowledged merits of the learned author have caused this work to be adopted without due examination. This "admirable treatise," (p. III. of the preliminary recommendations,) wherein the author "clearly explains the scientific principles," (V.) the result of his "close and profound attention," (VII.) and "Fleiss," (VIII.) or industry; "principles which Professor Lepsius has so ably sketched," (VII.) and which are to diminish "the

difficulties encountered in the *formation of a language* previously unwritten," (VI.)—this treatise, as a System, is unphilosophic, inconsistent, vacillating, and superficial.*

25. *Dr. Lepsius concedes* that an alphabetic system should admit of "reduction and enlargement without alteration in its essential principles." Yet a uniform mode of enlargement is not proposed, and whilst *'l* is allowed to represent an aspirate *l*, *'n* is not allowed to represent an aspirate *n*, because *l* is "fricative" and *n* "explosive," by a false theory; nor is there a substitute suggested for the forbidden spīrītŭs āspĕr mark. The diacritic marks used are not restricted to particular phases of speech; but, on the contrary, one mark is assigned several heterogeneous values.

26. *Professor Lepsius has not quoted* Mr. Ellis, who is much his superior in this intricate subject, nor Dr. Latham, who would have informed him that a diphthong is not composed of two vowels. Nor has he given the Latin alphabet a critical revision, if we may judge from his notion (p. 41) that the Latin *diphthong* Œ is the German *vowel ö*, and that OŒLUM ends with German *m*, and that this Latin word is, in German letters, kölum, rather than (in Polish notation) kòjlu„ or (French) cōylou".

27. *English spelling has a redeeming feature* to which the late period of its reform gives incalculable value. *Its corruption is so great*, that *any* consistent alphabet would have so many discrepancies from the present one, that the few concessions which the new could make, would be of very little aid to any one already able to read the corrupt one, whilst the drudgery of learning the irregularities of this, would be lessened but little by the form of a phonotypic one previously learned. Hence, as far as English is concerned, the new alphabet might be Greek, Russian, or phonography, because the labour of learning to read a consistent new alphabet is not great.†

28. *The Cherokees, who have a cumbersome* and imperfect syllabary of 85 characters, which must be laboriously written in their printed forms, when advised to adopt the Roman alphabet, express their distrust of ours, stating that the best argument in favor of their own is the fact, that when their children have learnt the characters, they are able to read.

29. *English spelling is so irregular* that any reformed orthography in Roman typography

* See my Report on the Present State of our Knowledge of Linguistic Ethnology, made to the American Association for the Advancement of Science, (Tenth Meeting,) August, 1856.

† The use of a corrupt alphabet induces bad habits in a phonetic one like Greek. A girl of fourteen, who knew the sounds of German and French, learnt the Greek alphabet in one hour, about one-fourth of which was taken up with a work on inscriptions, to account for the writing forms; but when words were to be spelled out, ἦν was converted into English *an;* εἰς (instead of having the initial vowel of *etah*) became *ice;* and to words like χάσμος with the genuine but short vowel of cŏast, that of *cost* was assigned, (for even in the modern tongue, *o* and *ω* have the same quality.) Similarly, several persons have been met with, who read the Spanish article *el* like the first syllable of *alley;* because, Spanish *e* being English *a*, *a-l* must spell *al*.

must present radical differences, because *one* mode of notation must replace *many* modes. Hence if *o* is adopted with its correct power in *host*, the word *lost* must vary from its present form, and nothing in the new can recall old forms like *lore*, *lose*, and the *seven or eight thousand words* spelt with final *e*, which must disappear from the whole, perhaps to be transferred to other words which have been spelt with a different final character. Digraphs being wrong in principle, they should not even be hinted at, as in using a character like ꝏ to recall the old *oo*, which ought not to be recalled intentionally, and for ages to come. Compare door, adore, oar, four; rot, rote, root, groat, slough;* mote, moat; they, met, meet, meat, mete; great, grate; bate, bait; bite, bight; heel, heal, fealty.

30. "*Writers on phonetics* . . . adopt the present letters as far as they go, adding a few new ones to complete the list. They wish to retain the old letters, so that the present generation may be able to read the new way with little trouble. Grave as this consideration may look, it is but a slight one. A man can learn a phonetic alphabet which is altogether new to him, in a few hours; a labor insignificant in an alphabet intended to spread over the world. There is no advantage to the learner, in retaining a letter as to its shape, and changing its character. We may retain the letter e, but *when we restrict it to one of the many sounds it now stands for, we make a new letter of it.* It occasioned me more trouble to remember that a particular sound belongs to the printing a, and another to the written *a*, than to attach those sounds to new characters, because in this latter case the other sounds of the letter a are not constantly occurring to my mind." Condensed from *An Endeavor towards a Universal Alphabet;* by A. D. Sproat, Chillicothe, Ohio, 1857.

31. *English spelling can be reformed thoroughly,* whereas, in Spanish, Italian, and German, the imperfections are fewer, and their removal less imperative. The Italian syllable QUI corresponds with Latin QVI, but Spanish *qui* has *u* silent. Italian uses J nearly in its proper Latin sense, Spanish corrupts it to a guttural aspirate, and uses *y* instead of Latin J; Spanish *ch* is *tsh*, Italian *ch* is *k*, that is, *h* keeps the *cay* pure in Italian, and corrupts it in Spanish. It may be long before such discrepancies are removed.

32. *The English word chew* (tshoo, Walker) would be expressed by *chu* in Spanish, *ciu* in Italian, *tschu* in German, *tchou* in French, *чу* or *muy* in Russian, *czu* in Polish, *csu* in Hungarian, and ושו in Hebrew. The Greek and Latin alphabets are incapable of representing it—for in *tshu*, the *sh* should have their power in *mishap*, and *s* being already an aspirate, it cannot be treated like the lenis *t*, to form *th*. If the English word *favor* were German, it would be spelt *fewer;* and if the Latin COR (heart) were English, it would be spelt *core*, as in fact it is.

* *As words*, 'groat' and 'slough' are unknown to the writer, except the latter as a medical term.

33. *If English spelling had been reformed* earlier, it would have been badly done, by persons ignorant of the bearings of the subject, and before a correct enumeration of the sounds had been made. Now physic'ists like Willis, Herschel and Faber, and philologists of the first class, contribute their stores, based upon a more refined analysis of the operations of speech. Formerly, had there been an educated class, (educated in linguistic science,) this class would have stood aloof until an alphabet as corrupt as the present one would have been fastened upon the language, making English the laughing stock of civilised and savage nations, indirectly checking its influence—cutting off the English people from the antecedents of their language, whether Anglic, classic or C'eltic—depriving them of the incidental etymologic knowledge which is suggested through the eye of a population where information is acquired by reading rather than by conversation—and surrounding them with a literary Chinese wall, not to exclude the barbarians, but to keep them within the circle of their abominations.

34. *If Walker had used a phonetic alphabet* instead of his figured notation, he would have done much towards a reform in spelling; but he would probably have allowed b-a-r to spell *bare* instead of *bar;* n-o-t to spell *not* rather than *note*—sanctioning corruptions which a better educated age might have a difficulty in removing.

35. *Walker's notation is not chronologic,* as in *tar,* which he marks with a_2 instead of a_1, or simply *a,* as *the original power for which the character was made.* A chronologic notation would run something like fa_1r, a_2ll, wha_3t, fa_4t,* a_5le, fa_6re, (French $\acute{e}$,) *umbrella*$_7$, ma_8ny, pla_9it; $mari_1ne$, wi_2n, wi_3ne, fi_4r; *Shang-hæ*$_1$, (-high,) $Gæ_2lic$, $Cæ_3sar$; o_1we, o_2r, ho_3rror, mo_4ve, wo_5rk. If, with such a notation, the orthoepists had represented a given sound with the letter having the lowest figure, the tendency would have been from corruption toward purity, and the figured pronunciation would have been a collateral aid to etymology, especially if characters which want the original power in English, had been started without the lower numbers, as in rhy_3thm, (y_1 being the Greek vowel, and y_2 the French i_1,) rhy_4me, my_5rrh, y_6ear.

36. *Mr. Trench uses an argument* which deserves attention.† He considers it an assumption of the spelling reformers "that all men pronounce all words alike, so that whenever they come to spell a word, they will exactly agree as to what the outline of its sound is. Now we are sure men will not do this from the fact that, before there was any fixed

* Mr. Ellis thinks that *arm* had the vowel of *fat* formerly;—that all what were not early sounds; that within three hundred years, made lade were mad lad, with the vowel lengthened; and that the historic order of the powers is—arm, fat, all, what, fare, ale. Mr. Ellis will present a history of English pronunciation for the last three centuries, in the third edition of his Plea, to be published in the United States.

† *English, Past and Present,* Lecture V., a production which, in sixty years, is likely to be regarded as a curiosity, if we may be allowed to reason from the condition of chemical notation in 1798.

and settled orthography [pronunciation?] in our language, when therefore every body was more or less a phonographer, seeking to write down the word as it sounded *to him*, for" like the Hebrews, Hindoos, Greeks, Latins, Welsh, and Cherokees, "he had no other law to guide him, the variations of spelling were infinite. [*] Take for instance the word *sudden;* which does not seem to promise any great scope for variety."

37. *Certainly not*, if we spell all the variations of *subdan* (with silent *b* as in *sub*—†) to suit the Latin SUBiTANeus, or conform them to the French *soudain,-e*. He proceeds to cite fourteen spellings, *assuming* that they represented the modern word, and not the lost forms from which our *sudden* is derived. Double forms like *soden* and *suddain*, perhaps of different age and locality, may (apart from the blunder of the double *d*) have been as correct formerly as are now *urban* and *urbane; human* and *humane; travail* and *travel; costume* and *custom; clarify, glory, glare, glair*, and *clear; emmet* and *ant; decking* and *ticking;* or *brest* of Wiclif, Chaucer, Shakespeare, and the lettered vulgar, beside *breast* of those who know not the use of letters, according to Prisc'ian's definition.

38. *Granting that these fourteen* spellings stood for the same vocable, having the vowel *up* in the first, and of *end* in the second syllable, these sounds were unprovided with special characters, so that *sud-* might be spelt *sod-*, with *o* in *worth*, or *sodd-, sudd-*, some writing *dd* to shorten the vowel, as we spell *add sad, will wilful*. Thus, *sodain* may have had the vowels of worth and *said*; *sodaine*—

> Jelous in honor sodaine and quicke in quarrell.—*As you like it*, 1623.

the *e* of imagine(-ation;) *sodan* the vowel of many; *sodayne* that of *says*, (*sayd;*) *sodein -e* that of heifer; *sodeyn* that of they pure, or modified as in its derivative them, as silent *b* turns *break* into *wreck*. Other forms would have been justified by friend, jeopardy, dead, fœtid, guess, panegyric, (*Ellis*, Plea 2d Ed., p. 155,) English being more irregular here than old English, with the difference, that the moderns corrupt a wider field with their irregularities. Abner Kneeland thus answers the foregoing objection.‡

* As in the variations of the Latin word DUO, which have been spelt as in *two, twice, twain, twelve, duodecimo, dodecahedron, dual, deuce, double, doubt, tub, diander, bisect, balance*:—or of GENTĪLIS—*genteel, gentility, gentile, gentle, jaunty;* of which the first, as the oldest and nearest the original, should have had a more etymologic orthography, whilst the last should not have been spelt with *j* and *y*. So Greek varies, as in γίννος, γαννὸς, γανὸς, γῖνος, ἴννος, ἶννος, ἰννός, a *hinny* (*ginnet, jennet.*)

† Here the writer consults Ogilvie's Imperial Dictionary to be assured that there is a word *subtil*, suggested by French and Latin, but he finds only *subtle* and *subtile*. The form attend*ance* caused *the third word* of this essay to be misspelt tend*ancy*, and *gauge* (§ 7) was spelt 'guage' through ignorance of the conventional form. In another place the writer has spelt *privitive* as 'privative.'

‡ A specimen of the American Pronouncing Spelling Book, &c. Philadelphia, 1824. Printed partly in a phonetic alphabet.

39. "*If this system of orthography* should ever be adopted for the language itself, it is recommended that *every author should write as he himself would pronounce;* and then, as it is natural for every one to strive to imitate the best writers and speakers, *in process of time the language would become settled* in a uniform mode of writing and speaking."

40. *It is becoming evident,* that without an orthographic reform, the integrity and universality of the English language will be destroyed, and the arch with which it spans the globe will fall into fragments more heterogeneous than the dialects now current in the British Islands. Webster gives a word *rail*-lery; and eng-*ine* is common in the United States: both being taken from books, and not from speech. This would not have happened if *raillery* had conformed to its analogue *gallery*, and *engine* (Fr. engin) to *virgin* and *origin*. These are examples of corruption in one direction; in another, chiefly due to the East Indian press, we find a jargon coming into use, and reminding one of the thieves' dialect in London. Thus, an English soldier will "loot the camp," where an American (since the Mexican war) will "vamos the ranch."

41. *The present author* laid an alphabet before a learned society in the year 1844, but withdrew it before it was reported on, because he had a limited knowledge of vocal phenomena, and was not acquainted with the Latin alphabet—a knowledge which must precede every attempt to employ it for phonetic, etymologic, or ethnologic purposes. Since that period, the Greek and Latin alphabets have been studied, but leaving three points still in doubt; namely, whether Greek η had the power of *e* in *they*, (the Latin E,) or in *thêre*, (but accepting the latter, chiefly on the authority of E. A. Sophocles;) next, whether Latin O was German, English, Spanish, and Portuguese *o*, or Italian *o*, (which varies a very little towards *awe;*) and, what was the nature of Latin L, of which the accounts given by the ancient grammarians are unsatisfactory. From philologic considerations, O and L have been assigned their German and English power, which would cause the German word *lob* (praise,) the English word *lobe*, and the first syllable of the Latin LOB-us to be written LOB.

41 *a*. TEN PARADOXES.

1. The letters *c* and *s* never have the power of *sh* in English.

2. In disquisitions upon the elements of speech, the term diphthong is useless.

3. The term *euphony* is useless in etymology. (This view has been anticipated in Prof. Key's paper "On the Misuse of the terms Epenthesis and Euphony." Philological Society's Transactions, 1847, Vol. III. pp. 45—56.)

4. Allowing *wh* or *hw* to represent the initial sound of *when*, and *en* the closing vowel and consonant—'*when*' or '*hwen*' will not spell the word.

5. In Devonshire, *turnip* is *turmit*.* This is not an example of a change from *n* to *m*.

6. The word *pigeon* is spelt with a silent *g*.

7. The assimilation of *ad* to *af* before *f* in AFFINITAS, is not present in *affinity*.

8. As English allows a word to be spelt like its cognate in some other language, (writing *p*SA*l*M, with its *three* elements, as if it were the Belgian PSALM, with *five*,) the paradox of an entire English line thus written, is presented in § 14, the line being—

"Heart, my heart, Oh why this sadness!"

9. The muskrat is a rat-shaped rod-ent with a strong scent of musk; yet it was not named from its musky odor.

10. Port Tobacco in Maryland is a port at which tobacco is shipped, yet *port* and *tobacco* had nothing to do with the original naming of the town.

CHAPTER II.

BASIS AND RULES OF NOTATION.

When a science is imperfectly developed, or founded on a false theory, it is sure to find itself in difficulties and restrictions, which form a stumbling-block to the student, and frequently cause its rejection altogether.—*W. G. Herdman*, Art Journal, 1849, p. 330.

The complete alphabet *must not contradict the Latin* parent alphabet; that is, every Latin letter adopted into the complete Slavonic alphabet, must have no other than its Latin power, Latin being, as it were, the universal language.—*Poklukar*, Ankündigung eines . . . Universal- oder Welt- Alphabetes. Laibach, 1851.

None but *Latin letters* are to be admitted into the universal alphabet.—*Max Müller's* Languages of the Seat of War, London, 1855, p. 54. . . . . with a due regard to the primitive power of the Roman alphabet.—*Sir W. Jones.*

Finding the statements respecting the Latin alphabet to a certain extent contradictory and unsatisfactory, I resolved to investigate it, with the intention of using it *strictly according to its Latin signification*, as far as this could be ascertained. *Haldeman*, Latin Pronunciation, Philadelphia, 1857.

§ 42. *Although the Roman alphabet* has been extensively used as a basis of notation, the Russian occupies a wide space, not only for the Slavonic languages which employ it in a modified form; but it constitutes one of the alphabets of Wallachian, and is extensively used by the Russian philologists for the various languages investigated by them—but not exclusively, for Castrén uses the Roman alphabet for Samoiédic, and Poklukar (apparently an Illyrian) recommends it for the Slavonic languages. Duponceau (Am. Phil. Trans. Vol. I., New Series, 1817, p. 264,) recommended the "small Greek alphabet" (excluding capitals) for general purposes, with additions from the Russian.

* Palmer's Devonshire Dialect, 1837, p. 91, mentioned also in George Jackson's Popular Errors in English Grammar, 1830, p. 24. This curious form has been developed spontaneously and independently by two children when learning to speak, in a locality where the existence of such a sound was unknown.

43. *The Latin alphabet is adopted* in these pages, after considerable practice with other modes of writing, and letters are recommended which have not been used in collecting examples from native sources; so that *nothing is recommended because it was familiar, or in use in the vernacular of the writer.* The object in view has been to subserve the cause of science, from a scientific basis.

44. *The Latin alphabet is very ancient,* its power can be ascertained better than French, when this is investigated from books alone, and it runs parallel with Sanscrit, Greek, and the archaic portions of English. As long as Latin was studied for its literature, its pronunciation was of secondary importance. Now that it is to be quoted, not only to solve the deepest problems, but to give to school-boys an idea of the steps in the formation of a vernacular word,—it has become necessary to lay aside the conventional pronunciation, at least when lessons in the genuine principles of etymology are given.

45. *Ten years hence,* every pupil in a grammar school may know that he cannot derive an English word with a *cay* power, from a Latin one with a letter called *see,* (as *canker* from cāncĕr, or *sickle* from sīcīlĭs;) nor pervert Latin cēră (wax) in *one* direction to enable him to derive *cerate;* or vāllūᵐ in *another,* to *remove it* from *wall,* the initial of vāllūᵐ, Sanscrit vălă, and *wall,* and of cēră and Irish *ceir* (*wax,* with *k*) being identic.*

46. *Yet the bigotry of a false education* is such, that for a few years it will be as difficult to convince school teachers, that an *identic syllable* is used in the English (*e*)*lide,* the German *leid* (an injury,) and the Latin LÆD(-o, I injure,) as it is to convince them that letters called *jee, e, double-you, dzhee, a, double-you,* cannot (literally *call out, name,* or) *spell* "gew-gaw."

Rule 1.

47. *Every simple sound or element should have a single letter to represent it.*—Max Müller, Latham, Lepsius, Rush, Matushik.†

47 *a.* "This excludes the combinations *ng, ch, th.*"—*Lepsius.* It excludes Lepsius' 'p, &c., for *p* and *h* in ha*p*hazard, because he has already a *p* and an *h;* and g' in *gem,* because he has *d* and French *j;* and it excludes German *z,* Latin *x,* Albanian *ndzh, mb, nd,* &c.

* It appears from Prof. T. F. Richardson's "Roman Orthoepy," New York, 1859, that he has taught this subject in Rochester University for the last eight years, with the concurrence of the authorities. This institution has therefore the honor of taking the lead in *Latin* instruction, by rejecting the barbarous jargon which has hitherto usurped its name and place. Here we find J as in *year,* Æ is *eye,* and C, G, are *cay, gay.* The learned Kraitsir has also done much for Latin in his "Glossology," New York, 1852.

† The same combination of sounds should, under the same circumstances, be always represented by the same combinations of symbols, and conversely. . . . I consider also that contractions are admissible (a single letter for any combinations of frequency) provided they are always used in the same sense.—*Ellis,* MS.

48. *Rule* 1 *excludes that false notation* which has arisen from inability to analyze sounds. Several English orthoepists regard *oy* as compound, because they can detect its vowel or initial in other places, who suppose *i* (eye) to be simple, because they cannot get quite the same initial vowel in other places.

49. *One letter for two sounds being unphilosophic*, there can be no rule to restrict such a license, and where the Italian fancies there is a necessity for a *ts* and a *tsh* character respectively, the Albanian with equal propriety, may ask for their reversals *st* and *sht*.

50. *There is no scientific reason* for writing *kinn* in German, and k,in or c'in for *chin* in English (§ 21, &c.,) because *dzh tsh are not always due to gutturals*, as in Italian *gioglio* (LOLIUᵐ,) *giglio* (LILIUᵐ,) *giraffa, concistorio, cinghiale, ciocciare; checkmate, charivari, chaparal.* *Cay* may also become *s* or English *z*, as in despiCable, despiSe; and if g_2 or g' is to have the corrupt power in *g,em* because it is often derived from *gay* (from any guttural, or from *h*,) shall we spell *jealous* with it? or with a marked *z*? because it is from *zealous*, and in fact, English *z* and *j* are more nearly allied than pure and corrupt *g*.

51. *But cay and tshee, gay and dzhee*, have no analogy, still less have they affinity. "En histoire naturelle, rien n'est plus trompeur que les analogies," says Cuvier. It is true that *cay* may become *tshee*,—any guttural may become any dental or palatal, (as χ becomes *s* in *surgeon*,) but if they were allied, *tshee* would readily become *cay*, when some would deem it necessary to indicate a *cay* thus derived, by an underived *tshee* character. Compare HÆREᴇSIS with Sp. heregía. A prognathic African will convert *wreath* into *reef*, but not the reverse, § 301. Here there is analogy but not affinity between *f* and *th*. Stones roll from mountains into valleys, yet this is no proof that valleys are a kind of mountains. An immersed cork will rise, but not because it has an affinity with surface water.

52. *Those who wish a tshee sound* to be represented by a guttural basis, are inconsistent, having failed to provide one (as χ') for *sh* in forms like *chamois* (from *gems*,) *sherry* (Xeres;) Fr. *machine, chambre, chien, chou;* It. *scimia* (SIMIA) *vescica* (VESICA;) or Fr. *j*, in *joug, jour, jeune, manger, cage* (CAVEA,) *orge* (HORDEUᵐ;) and a different one to indicate the common change from *sh* (through SJ) to *sk* in *skiff, ship*, which is fully as important as that from *g* pure to *g* corrupt. Nor are the most important and characteristic mutations of Russian and Polish, of Welsh and Irish, or of Greek (χριΓή, χρίZω; Ger. fraG-en, φράZω,) deemed worthy of special notation.

53. *The use of the same base letter* for *g*ame and *g*em, and for *c*ar and *ch*ariot, to accommodate Sanscrit and other languages, really contradicts the principles of Sanscrit orthography, which does not acknowledge any affinity between these gutturals and palatals, as (using Eichhoff's orthography) in AG, or AJ', (to move.) Eichhoff's roots 268, KAKH (to cry, to laugh,) 244, J'AKS (to cry, to laugh,) 267, KAC' (to resound, to laugh,) and 211,

çuc' (to cry, lament,) are essentially the same root; and if the Hindoos are willing to spell corrupt *dzh*, *tsh*, differently from pure *gay*, *cay*, we should not insist upon spelling them on the same basis.

54. *Many find it difficult to believe* that numerous Latin and Greek words are older than Sanscrit; so the scholars of our day have formed a fictitious Sanscrit, as formerly a digammated Greek was formed, because it was the fashion to believe Greek older than Latin, ὄϊς older than ŏvĭs, and the Sanscrit root *tshad* or *tshand* (to shine) older than Latin cāndĕo. Admitting the root *cad* or *cand* in some antecedent of Sanscrit, this does not give age enough; forms like *nd* not being original. This *cand* is probably older than *cad*, where *d* has absorbed the *n*, and newer than the probable true root CAN, from the *n* of which the *d* of *cand* was educed.

RULE 2.

55. *No letter should represent more than one sound.*—Latham, Lepsius.—Hence, if *t* is proper in *tap*, and *h* in *hat*, *th* cannot be used as in *that*, *three*.

RULE 3.

56. *Sounds made by one contact of the organs of speech, are not to be represented by a letter made to represent a sound belonging to a different contact.*

56 *a*. Hence, a pointed *d*, *t*, cannot be used for *th* in *then*, *thin;* a pointed *s* for *sh*, which is often derived from a guttural, or from *sc;* a pointed *c* for the *t*, &c., in *tip*, *sip*, *tsip*, *ship*, *tship*. In all these cases this rule would be broken, for *th* is not the aspirate of *t* in the sense that Welsh *rh*, *ch*, (German *ch*,) are aspirates of *r* and *cay*. *Th* and *s* have equal claims to be considered the aspirate of *t*, *s* being as near the *t* position posteriorly, as *th* anteriorly.

57. Mr. Hale in the Philology of the U. S. Exploring Expedition, assigns Latin (J) *yea* to French *j*, a corruption which shows little respect for the purity of Latin, and which would tend to barbarise it, to the extent of its adoption.

58. *Sh is in no sense an aspirate of s*, and as it is perhaps more often derived from a guttural than from *s* or *t*, it is a great error to represent it by a marked *s*. Indeed, it would be more proper to represent *s* by an *sh* character. Several English alphabets have an *sh* character made to recall this combination, which is as absurd as to let *fhin* spell *thin*, because it is allowing an aspirate sound belonging to one contact, to be represented by marking as *aspirate*, a known *aspirate* of the adjoining contact.

RULE 4.

59. *The group of letters representing a distinct word is to be separated by spacing from preceding and succeeding groups, and the order of Latin typography is to be preserved.*

59 *a. This forbids forms* like *would'nt*, &c., for *would nt, had nt, I l, I v, I m, you v, we l, we r, he s, t will, it s*, or *t is*, &c. French is badly written on account of this jumbling of the signs of entirely distinct words; writing as two, the five words "qu' este'que ça," instead of *q e s q ça*. "Ah c'nest qu'une peinture" (Vadé, 2, 111,) *â s n e q une*, &c. "L'solèil s'lève (ib. p. 186,) j' suis, j' crois, j' dis." "Dans l' tems que j' l' écoute," p. 215. "Et où c'qu'est l' profit?" (ib. 3, 193,) *e u s q e l profi?*

60. *There is no more necessity* for writing French *j* against *ai*, in *j ai* (I have,) than in writing the English abbreviation *I* thus, in *I am* or *I m*. The fact that several words may make one syllable, or have but one vowel amongst them, has nothing to do with the question. The Slavonic prepositions *o, w, z*, are written separately, like other words.

61. *Some think that* t *of* tsh, *not being* quite the common *t*, requires a *tsh* character, although this *t* (and *d* of *dzh*) might be marked by those who deem it necessary; but if *t* in *tsh* is drawn back to meet *sh*, this may take place with the final *t* of one word, and initial *sh* of the next; and with all coalescing or diphthongal pairs, giving to the syllables *courtship* the sound of *core chip;* and using the English diphthong *oy* in saying rapidly "the *law is* just," as if "the *loys* just," making three syllables instead of four.

62. *Although in Latin poetry* the concurrence of two vowels, as in (Virgil, book 1, line 177,) CEREALIAQVE ARMA, requires the first to be rejected, (making CEREALIAQV ARMA,) yet the measure may be preserved if we allow a diphthong to be formed, as in the same line, where *u* of UNDIS may be made the last element of a diphthong, the initial of which is nasal A, the words being CORRUPTA^{m} VNDIS. Compare Æ with a nasal A, in line 41, NOXA^{m} ET;—EJ, line 45, SCOPULOQVE JNFIXIT;—U^{m}J, line 46, DIVU^{m} JNCEDO;—Œ, OJ, line 48, GERO ET, or GERV ET, &c.

RULE 5.

63. *The Latin alphabet should be the basis, each letter being used in its Latin sense, and restricted to the sound it was made for.* Latin orthography, as that of an Indo-European language, exhibits words which still exist with the Latin sound. These, however few, should have the Latin spelling, unless this is inconsistent with the preceding rules.

RULE 6.

64. *When a sound unknown to Latin has arisen, it should be provided with a new or modified character.* Rules 5 and 6 constitute the philosophy of notation, that alone by which the entity, comparative physiognomy, and history of words can be portrayed.

65. *The empiric mode* usurps Latin letters for barbarian sounds, thus separating them from the elements with which they have been associated from remote antiquity.

66. *Professor Max Müller* would have none but Latin letters used. This is too stringent a rule, as new letters should be added where new sounds have been added.

67. *Some alphabetists take credit* to themselves if their unlatin pages present a Latin appearance through the misemployment of Latin characters (but not letters.) They sprinkle them with the unlatin, unitalian, unspanish and unfrench letter *kâ*, pervert *qoo*, made for a throat sound, perhaps to represent *wh;* use the capital "A" in one sense and the small letter in another, with perhaps neither in its Latin and Romanic sense; use Teutonic W for a Latin sound and its letter, and pervert Greek ε and Υ that they may represent Latin sounds already represented. Hence,

68. *If we have no use for certain characters,* as those of *b, p, f,* in some of the American languages, we can by no means employ them for new sounds unknown to Latin, to give a deceptive Latin page, or to accommodate a frontier printing office. Nevertheless, to use the *b* character for an aspirate of *m,* and the *f* for English *wh,* would be trivial errors when compared with the perversion of *c* for English *sh.*

69. *Dr. Latham's second rule* (English Language, 1841, Chap. IX.) should be remembered in forming new characters, and especially in the application of diacritic marks. It requires "That sounds within a determined degree of likeness, be represented by signs within a determined degree of likeness; whilst sounds beyond a certain degree of likeness, be represented by distinct and different signs, *and that uniformly.*"

70. *Examples of allied letters* for allied sounds occur in the Latin CG, IJ, UV, BP, PF, FH. Greek has Δ *d,* and its liquid Λ *l;* a dot over Arabic *r* makes English *z;* in Persian arrowhead, *aleph* and *ain,* and also *r* and a variety of *z,* are distinguished by the position of a wedge on the left or right; Sanscrit from *b* forms (English) *w,* and *p-h* from *p;* but *t, t-h, d, d-h,* are quite dissimilar. In Thibetian, the affinity is exhibited between *b, p, ph; t, d* (but not *th;*) and *g, k,* (but not *kh.*)

71. *Welsh had a philosophic alphabet* before the invention of printing, for the representation of the mutes and their phases, and based upon the Roman letters as follows:—

b	*d*	*gay*
v	*dh*	(*wanting.*)
p	*t*	*cay*
f	*th*	*ch*
m	*n*	*ng*

Here *m* is acknowledged as a nasal *b,* *n* as a nasal *d,* and perhaps *ng* as a nasal *gay.* Aspiration is indicated by a line, which on the left of the *gay* character, would have given it the sound heard in Belgian, and as this is wanting, the laws of permutation which would place it in a word, cannot bring it forward. Hence *gafr* (Latin căpĕr a goat) becomes *dy afr* (thy goat) instead of *dy ghafr*—the analogous form.

CHAPTER III.

ALPHABETS, PICTORIAL, PHILOSOPHIC, AND CONVENTIONAL.

. . . . c'est que l'écriture est un ouvrage encore bien imparfait des hommes, et que la parole est une création de la nature.—*Olivier*, Des Sons de la Parole, Paris, 1844.

§ 72. *It is agreed* that the diverse Latin, Greek and Hebrew alphabets have been derived from the Phenician, and that the earliest form of this was hieroglyphic, each letter being the picture of an object whose name commenced with its power. The letter Qoo pictured the human head and neck, the neck being made as a vertical line below, until writing in two directions threw it to the right (Q, q,) or (ꟼ) left. R was a side face looking to the right, the tail representing the beard; but, as this was sometimes omitted, we find that *r* has two forms (R, P,) in different Greek inscriptions.

73. *The earlier form* (⅂) of the Hebrew ג gimel represented the head and neck of a *camel* (Hebrew gāmāl) looking towards the left, the direction of Hebrew, Etruscan, and some Greek writing; whilst the Greek (Γ) gamma represented it looking towards the right. One of the forms (<) of this became rounded into Latin Cay, acquiring a new power as readily as the word acquired initial *cay* in the Latin CAMELUS, *sh* in the French *chameau*, and *dzh* in Arabic. Hence,

74. *There are several objections to hieroglyphs.* Every language would require a different set of symbols; the symbols for allied sounds would be dissimilar, and the power of the characters would vary with the name of the objects represented, until variations in the written forms would cause the originals to be forgotten, so that instead of more accurate pictures of an *ox*, a *house*, a *camel* or *cynocephalus*, and a *door*, we should find the apparently conventional figures *a*, *b*, *c*, *d*.

75. *Hieroglyphic or picture alphabets* would be readily suggested at the invention of writing, and they are more easily learned and remembered than any other kind. On this account, a French hieroglyphic alphabet has been proposed—*Les Hiéroglyphes Français*, par C. Chesnier, Paris, 1843, in which a pointing finger (*in*-dex,) stands for the nasal vowel *in*, an *an*-gel for *an*, the numeral 1 for *un*, a pink (œillet) for short *eu*, a sword (épée) for the vowel of *fate*, a hatchet for short *a*, the head of an ass for *â*, a pipe for *p*, and a bomb for *b*, &c., with symbols for *bl*, *pl*, *cr*, &c., requiring fifty-five characters for the French language.*

* It is applied to foreign languages in the most perverse manner, the aspirate of the Spanish word *evangelicos* being given as English *gsh* (in egg-shell,) and the nasal *an* is placed in *tanto*, and in the Greek *amphi*. In Italian, French nasal *in* is placed in *denti*, *esempio*, and nasal *on* in *contare*. In English, the same vowel is assigned

76. *Figures of the organs of speech*, either pictorial or mnemonic, must have attracted attention at an early period; and it is probable, that when the knowledge of the hieroglyphic origin of the common alphabet was lost, the form of the letters was influenced by the position of the vocal organs, as in figuring the closed lips in B, and their circularity in O. Pownal (Study of Antiquities) accounts for the vowel characters in this manner. I (in marIne) would represent the linear aperture, the figure being turned to range with other letters. A (in Arm) would represent the mouth well opened. T might figure the tongue rising against the palate; θ the tongue forming an obstruction in the middle of the mouth; ϕ a similar obstruction by the two lips, but with a vertical line to distinguish it from θ. The middle line of E (in vEin) was originally as long as the others, and might represent an opening of the mouth nearly as narrow as that of I. H was much like E, being a square with a horizontal medial line, and in some Greek inscriptions, the character H represents the consonant *h*, in others the vowel *e*.

77. *Such a system is impracticable* from the difficulty of figuring the position of the inner organs; and as the number of essentially distinct elements is not great, a pictorial representation of them would be as little worthy of attention as a proposal to use the sign III instead of the numeral 3 in arithmetical processes, as being more suggestive of *three*.

78. *An anonymous author* issued a sheet from Lockport, New York, in 1853, proposing a set of characters to indicate the organs. Here ʙ is *b*, its reversal ɑ (with the apex of the semicircles angular) makes *p*, and ɑ (with the curve angular) is *f*, the base representing the lip and the top the teeth. This reversed, or facing to the right, is *v*; a character like m (with the left side rounded like the right) is *m*, and *w* when inverted, leaving English *wh*, German *w* and Greek φ unrepresented. D is taken as the base of the dental letters, the curve being the palate and the stem the tongue. Yet, whilst *n* is a nasal *d* (as *m* is a nasal *b*) the first and second lines of N are assumed to represent the nose, and the third line the tongue.

79. *A philosophic alphabet* would represent the same phase of speech in the same manner, and A. D. Sproat has endeavoured to accomplish this, as in ı *t*, ʟ *d*, ⊦ *n*, ⊦ *th*. Here the base line indicates vocality, the angular one aspiration, and the medial one nasality; but the *n* is discrepant, it represents a surd *n*, it wants the base line to make it indicate the common sonant *n*. This system has a shorthand form.

80. *Pitman's Phonography* has a philosophic basis, as far as this is compatible with rapid

to *for*, *of*, *none*; *men* is mén (mane,) *have* is âv, *and* has nasal *in*, *hath* is âs, *the* has French *z*; *despised* is despă-ist, with pure *st*; *others* in French orthography would be ăzzœurss, and Goldsmith and Göthe ought to have spelt their names *Golshmeet* and *Göt*. In German, *euch* is made up of short French *a*, long *œu*, and French *ch* or English *sh*; *zu* is made (in French spelling) the impossible *tzou*; German, English, and Greek initial *h* is silenced, and Greek θ χ are turned into *k*, *t*.

writing, and it might perhaps be adapted to print.* But as it is an essential feature of shorthand, that every available sign shall be employed, that for English *th* would be assigned to some other sound in a language without this lisp, which would destroy the uniformity of notation between different languages.

81. *Script and print are essentially different* in this, that as facility in execution must be a primary object in writing, the most complicated character can be printed with the same ease as the simplest one. But, notwithstanding this feature, a uniform notation for writing and print is perhaps desirable. The two kinds of common print, roman and italic, are copied after manuscripts, and the forms of written and printed Greek do not differ.

82. *The Cosmosphonography* of Gouraud† is an attempt to construct a condensed writing character, which may be printed with separate types, specimens of which he gives. The author is said to have been a fluent lecturer in French, Spanish and English, but he has made no critical observations on pronunciation.‡

83. *Of conventional alphabets*, the Cherokee is a good example. Sequoyah the inventor had a book in the European characters, which, as he inferred or was informed, conveyed intelligence, but in a mode as obscure to him as the Egyptian hieroglyphs to father Kir-

* Henry M. Parkhurst (Ploughshare, Washington, June, 1853,) has proposed such a "Cosmophonetic Alphabet." His alphabet is inconsistent; because, for example, surd and sonant marks were deemed necessary for *p*, *b*, but not for *w*, *m*.

† Practical Cosmophonography: a system of writing and printing all the different languages, with their exact pronunciation, by means of an original Universal Phonetic Alphabet, based upon Philological Principles, and representing analogically all the Component Elements of the Human Voice, as they occur in Different Tongues and Dialects: and applicable to daily use in all the branches of business and learning, illustrated by numerous plates, explanatory of the calligraphic, steno-phonographic, and typo-phonographic adaptations of the system; with specimens of the Lord's Prayer in one hundred languages; to which is prefixed a General Introduction, elucidating the origin and progress of Language, Writing, Stenography, Phonography, etc., etc., etc., by Francis Fauvel Gouraud, D. E. S., of the Royal University of France, New York, 1850.

‡ In his opinion (p. 76,) there is an "absolute identity" between the English *an*, l-*en*-t, f-*on*-t, s-*un*-k, and the French nasal vowels *an*, *in*, *on*, *un*, respectively. He assigns the C[k]eltic vowel in *fat*, to French, German, Italian, &c., and he considers the English *ou* in *fount* to be the vowels in *nor* and *put*. He says of the French vowel in *peu*, *vœu*, that it is "a sound which the English learners of that language generally think so difficult to pronounce, although they use it a hundred times a day." He assigns the French vowel in *cœur* to English *cur*, and finds French *u* in rapturous. The numerous versions of the Lord's Prayer are given in their peculiar orthography, without pronunciation or translation, so that such series of Chinese or Cherokee characters must be useless to the great mass, even of philologists. No. 33 is a specimen of "Gothic" in Gothic characters, with some of the words improperly divided; No. 61 is "Mœso-Gothic" in Roman letters, being the same thing. The latter is credited to Ulphilas, the former, in the Ulphilas character, to Stjernhjelm, who gives a plate of it in his version of 1671. The foreign alphabets are in bad, and often inaccurate lithography. Some of the versions commence with the prayer, as the Hebrew, Irish, Armorican, and Croatian; others commence with the verse (Matthew vi. 9,) as Gaelic, Welsh, Russian, and Cherokee, so that comparisons may be thwarted at the commencement.

cher, or the characters on a tea-chest to a London grocer. He used them in a syllabic sense, varying their forms, and adding others to complete the number eighty-five. Here K became *tso*, and J *coo*, which latter is not so bad as making it *zh* or *dzh*. The second and fifteenth word of the Lord's Prayer in Cherokee, is, in French orthography—că-l'ŭn-lă-ʻí, (heaven,) but with German flat *k* and *t*, the last vowel as in English *pit*, accented, the *a* in *art*, and the second syllable exactly the French *l'un* (the one.) In Gouraud's Transcript, No. 30, this word stands first in the third line; and the third from the end of the first line. The characters are read towards the right.

84. *Although the Cherokee alphabet* is syllabic, beginning with a consonant, as *lo*, *tlo*, *tso*, a word may begin with a vowel, so that there are vowel characters, as D in *a*rm, R in vein, T in field, &c., and this being the case, it may seem singular that the inventor did not fall upon a strictly alphabetic notation, seeing that, when writing W *la*, ∂ *le* (*lay*,) r *li* (*lee*,) M *lu* (*loo*,) he might have used WD, ∂D, or RD, for *la*; WR, &c., for *lay*; and WT, &c., for *lee*.

85. *But there is a great difficulty* in getting an abstract idea of a consonant, as distinct from a syllable. The con-sonant 'P' is nothing when alone, 'L' is something. But *pa* and *la* are alike in termination, with an initial difference. Their notation must be analogous, and if syllabic, it can be appreciated. But if the initial and final effect of *la* have each a character for the sounds which are so readily appreciated, *pa* must have the same *a* final, whilst it has nothing corresponding to *l* in the sense of an element which can be pronounced independently. The *p*' of *pa* cannot be detached from *a*, it is a nullity without it, *pa* must therefore have a single character, and if *pa*, so also *la*.

86. *The same course of reasoning* perhaps, causes Dr. Lepsius to assign single characters to the Hottentot clacks, which are made with a *consonant* position followed by a *vowel* position of the organs;—to term *m*, *b*, *p*, equally explosives; and in fact, *m* is whatever *b* is, with nasality added, differing as a nasal vowel differs from a pure one. If then, *b* is an explosive, so is *m*, and if *m* is not explosive (and it is not) neither are *b*, *p*.

87. *Those who term P an explosive*, take the Tsă-lă-**kí** view, mistaking two phenomena for one. P may be compared to a gate in a water course: if quite open, the water flows like a vowel sound, if let down nearly close, the flow may resemble that of *f* or *th*; if closed entirely, or closed or opened suddenly, the gate acts like P on the current of the voice or breath, or like B, should the water continue to gurgle and dam up behind the obstruction; or like M, should the stream flow over the gate, or find a side passage; and when the stream issues suddenly, in an "explosive" manner, it is the current, not the gate or obstruction, which is explosive.

CHAPTER IV.

THE LATIN ALPHABET.

At present, ancient Latin usages are the only feasible basis for an alphabet that the learned in all nations can use; the letters, as far as possible, having their ancient Latin values.—*Ellis*, Universal Writing and Printing, Edinburg, 1856.

The life of all language is pronuntiation.—*Roger Williams*, Key into the Languages of America, London, 1643.

La prononciation est la chose la plus importante dans l'étude d'une langue .... La prononciation est à une langue ce que les couleurs sont aux figures d'un tableau.—*Robello*, Grammaire Italienne.

..... it will be found upon critical and candid inquiry, that much, which at first sight strikes us as barbarous, is only ancient.—*Pennington*, An Essay on the Pronunciation of the Greek Language, London, 1844.

§ 88. *Most of the languages of Europe* for which the Roman character is used, preserve the original power, except that the greater number of sounds in some of the modern languages prevents each of the characters from being restricted to a single power.

89. *The characters* of the Latin Alphabet are the *twenty* following:—A, B, C, D, E, F, G, H, I, L, M, N, O, P, Q, R, S, T, V, X; and of these, *nine* had the same power as in English, namely: B, D, F, H, N, P, Q, T, X.

90. *The names of the letters*, according to the ancient grammarians (Schneider's Grammatik, Berlin, 1819, p. 2,) are, for the vowels, their power, and for the consonants, the following syllables, given in English spelling,—*bay, cay, day, aif, gay, hah, ail, aim, ain, pay, coo, air, ace, tay;* to which Schneider adds *kah*, and I *consonant*, V *consonant*, these being called by Eichhoff (in English spelling) *yee*, and *way*. Sometimes Greek K was used in writing CALENDAE; and Y, Z, appeared in unnaturalised Greek words, with their Greek power of French *u*, and English *zd*.

91. *In modern books* when I would have its consonant power of English *y*, it is sometimes varied to J; and V *oo* is sometimes rounded for a vowel, and left angular for its consonant power of English *w*.*

92. *The Latin Vowels* are long (marked ¯,) and short (marked ˘,) the short ones having *the same quality* as the long ones, with but half their length. Some words are long or short according to the usage of the poets.

93. *The power and name* of the Latin vowels are always as in the following English words—

* For example—"DE SONIS LITERARVM GRAECARVM TVM GENVINIS TVM ADOPTIVIS LIBRI DVO AVCTORE GVSTAVO SEYFFARTHO,"—etc. Lipsiae, 1824. This author uses the spellings—vt, huius, quamuis, inuita, leue, diuersa, subiecta, vera, prouocari, obiicere, &c.

A*	*long*	ārm,	short	ārt,	never as	in *at*
E	"	vēin,	"	ĕight	"	*ebb*
I	"	fīeld,	"	decēĭt,	"	*it*
O	"	ōh,	"	ŏbey	"	*ox*
V	"	fōōl,	"	fŭll,	"	*up*

94. *Their power is the same in the diphthongs*, except that the second element is slightly varied to make them pronounceable in a single syllable; for, as Priscian, the chief of the ancient grammarians, says—"A diphthong is a union of two vowels, both of which are sounded."† Thus Æ is *eye*, the Greek AI, sometimes seen in Latin and occurring with it in an inscription (No. XI.) in the Capitol at Rome, where the consecutive words occur—VERNAE KARISSIMAI SVAE. Œ is very like o-i in *going*, show*y*, and the Portuguese ŒTO (or oito) eight; EI or EJ nearly as in prey*i*ng, Bohemian *ey*, or Spanish *ley* (law,) AV or AU are like *ou* in out, or Danish AV in HAVN (rhyming with *town*) a *haven*. If, therefore, *hound* were a Latin or Danish word, it would have the (only correct) orthography—"havnd." AU has its Latin sound in most of the modern languages; Æ and Œ (or oi) in Portuguese, as in "Shanghæ" (-high,) the orthography of which is due to the Portuguese navigators.

95. *The terminations um, em*, &c., are nasal vowels, as in French and Portuguese, no final *m* being heard even, when the next word begins with a vowel, where it would be heard in French. The quality of the nasal vowel is that of its pure form (as far as we

* A in *arm*, because *according to the ancient grammarians*, it must be made with the mouth gaping or expanding, HIATU ORIS as described by Marcianus Capella, and RICTU PATULO in the verse of Terentianus (Maurus) and the prose of Victorianus (Afer;) or like the Greek *A*, which, according to Dionysius of Halicarnassus, was made with the mouth open as much as possible.

"The E which follows, is formed by reducing a little the aperture of the mouth, and drawing the lips inwards," that is, in comparison with Ah, which he had just described.—*Victorianus.*

I—"The mouth half closed, and the tongue lightly touching the teeth, gives the sound."—*Victorianus.*

O short "is pronounced with a not great opening of the lips, and with the tongue held back; but the long one pronounced, will give a tragic sound from the produced lips (PRODUCTIS LABIIS) and rounded mouth (RICTU TERETI, slender cavity of the entire mouth?) the tongue detached from the palate."—*Victorianus.*

V—"Whenever we pronounce this letter, we will emit it with lengthened and converging lips."—*Victorianus.*

V—"Whenever we prepare to emit this sound, we will endeavor to utter O, and thus the sound will be produced, but with lengthened and converging lips."—*Terentianus.*

"V is formed by constricting the mouth and projecting the lips a little."—*Marcianus Capella.*

† DIPHTHONGI AVTEM DICUNTUR QVOD BINOS PHTHONGOS, HOC EST VOCES COMPREHENDUNT, NAM SINGULAE VOCALES SUAS VOCES HABENT. See Haldeman's Latin Pronunciation, Philadelphia, 1851, p. 28 and 69. When barbarians prepare their so-called "Latin Grammars," without consulting Priscian, we need not wonder that so many of them do not know the difference between a diphthong and a vowel, or consonant and vowel combinations like UA in QVARE. This is not a criticism upon their conventional pronunciation, but upon their definitions, which assign to "Æ" a *single* sound and call it (di-phthong) *two* sounds, and to "I" two sounds, but calling it a (vowel) single sound.

know,) so that *im* is not to be read in the French manner, with the vowel of *fat* nasalised (as in vin *wine*) but with that of *field*, said to occur in the Portuguese *im*.

96. Cay *is always K in Latin* (according to Latin authority,) as in Anglish, old high German (which also uses *k*,) Welsh, Irish, and Gaelic.* Hence, to confound the proper names CYRUS and SYRUS (except perhaps as English words,) or the Anglish *cing* (a king) with *sing*, is like saying *sea* for *key* and *septic* for *sceptic*. Gay is always as in *give*, *get*, never as in *gipsy*, *gem*, or as in French.

97. H *is never silent*, even in the interjection OH, corresponding to the German *ach*, Irish *och*, &c. In representing certain Greek sounds, H is used after C, P, R, T, to indicate their aspiration—a mode of writing which (except for Th,) was originally Greek. In some Latin inscriptions, the single elements χ and ϕ are represented by H deprived of its first vertical line, and united into a single character with C and P.

98. J, *as in German, Belgian, Polish*, &c., or English *y* in *yet*, *year*, never as in *jet*, *jeer*, or as in French.

99. L, *according to Victorinus*, is made with the tongue and palate at the base of the upper teeth, which answers sufficiently to our *l*. But Prisc'ian assigns three powers to the Latin letter, one of which may have been the Polish variety.

100. M *as in* man, *but when final*, as in the Portuguese *bom*, French *bon* (good) even when the next word begins with a vowel. N never indicates nasality, although Chavée (Lexiologie Indo-Européenne, Paris, 1849, p. 22,) asserts that it does in Greek, but apparently without any ancient authority.

101. N *has two powers*, the first in *no*, the second in *angle*. The latter occurs in all cases before C, G, X, Q, where it was called N ADULTERINUM or impure. Nigidius Figulus, cites for it words like INCURRIT and INGENUUS, where English practice would place pure *n*.

102. Q *is a duplicate* of Cay, and indicates that the V *oo* which follows it has the consonant power in *well*, and not the vowel power in *ooze*.

103. R *requires to be trilled*.

104. S *has its Spanish power*, as in *hiss*, not that in *rose*, *miser*, *sure*. Its power in *miser* occurs in Italian, German, and French, but not in Spanish.

105. T *as in tun*, never as *s* in the French na-ti-on, nor *sh* in the English na-tion, nor *ts* in the German na-ti-on.

106. V *when a consonant, always* as English *w*. (See § 93 note on V.) This is the opinion of Bentley, Pennington, Key (Penny Cyc.,) John Jackson (Chronological An-

* Among the inscriptions of the Vatican, we observed the name *Eutychia* in one place as EVTYCIA in Latin letters; and the Latin words IN PACE borrowed in a Greek inscription under the form *ΕΝΠΑΧΗ*, as one word.

tiquities, London, 1752,) Payne Knight, Rapp, Eichhoff, Webster, Chavée, Donaldson, the author of "Living Latin," London, 1847, and Prof. John F. Richardson, (Roman Orthoepy, New York, 1859.) The Rev. Henry Thomson (Encyc. Metropolitana) says, "There is no evidence whatever that the Digamma or the Latin V was thus pronounced," that is, as English *w*. On the contrary, there is no evidence that English *v* was known to the Roman grammarians; it is a vocal *f*, yet *f* is the only element described as being made by the contact of the *lower lip and upper teeth*. (See the descriptions of Terentianus, Victorinus, and Capella.)

107. X as *cs* (sometimes as *gs*, not *gz*,) even when initial.

108. *In Latin and Italian* there are double consonants, both of which must be pronounced. Thus the *ll* in āllēgórĭa are to be sounded like *ll-l* in all-loving; *nn* in pēnna (a feather) as in the Italian Gio-van-ni (John.) *This is entirely different* from the improper use of doubled characters in German, French and English, to indicate etymology, the shortness of a preceding vowel, or the quality of a sound.

HEBREW IN LATIN LETTERS.

109. *The powers of the Hebrew letters* agree very well with those of Latin as given here, so that in general, a proper name will have the same sound if read in Hebrew or Latin, that is, when the same sounds exist in both languages. Latin could not represent Hebrew *shin*, (English *sh*,) and took *s* instead, and English commonly follows Latin, but sometimes takes *sh* directly from the Hebrew. Neither Latin, Greek, nor English takes the Hebrew, archaic Greek, and perhaps archaic Latin Q, which represents a glottal *k* in Hebrew and its cognates. The use of this would have made the etymologic part of the transliteration more consistent.

110. *The following have* Q in the original—Qɛmŭēl, ămālēq′, Isaaq, Jaqob (with English *y*,) Joqshan, Qa-in (Cain, a dissyllable,) Qādēsh, Qirjath, (English *y*.)

111. *As examples of the vowels*, we have forms like Sēīr, Sʰāūl, Sodōm, Edōm, Nōd, Ammōn, Enōch, Enōs, Nimrōd, Simeōn, Lōt, Magōg, Rehōbōth, Ashterōth, Lūdūm, Lūz, Shūr, Būz, Jūdith (Eng. *y*,) Rɛūbēn, Bēthēl (not bɛ-thɛl,) Bɛthūēl, Rachēl, Josēph (Eng. *y*,) Bɛērī, Bɛērsheba, Adbɛēl, Magdīēl, Tarshīsh, Dān, Gād.

112. V *stands for English w* in Lēvī, Javan (Eng. *y*,) Arvadīte, Nīnevēh.

113. H *as a final consonant* occurs in Noah (whence the adjective Noachian,) Nineveh, Gomōrrāh, Sarah, Rebeqah, Milcah, Machpēlāh; but not in Abidāh, which ends with ā. A different aspirate (the eighth Hebrew letter,) occurs in Hebrōn, Hēth, Zohar, Gaham, Nahōr.

CHAPTER V.

THE GREEK ALPHABET.

It is clear therefore, that a uniform system of Greek pronunciation is needed; and the truth of this position very few scholars will question. Such a system independently of its giving individuality to a language—a circumstance by no means to be overlooked,—will put the Greek on the same footing with the Hebrew, which no one has yet seriously attempted to read after the analogy of any of the modern languages of Europe.—E. A. Sophocles, History of the Greek Alphabet. Cambridge and Boston, U. S. A. First Edition, 1848, p. v., 2d ed. 1854.

§114. Figure,	Name,	Power,	As in	Figure,	name,	power,	as in
Α α	*ἄλφα*	a	*ärm ärt.*	*Ν ν*	*νύ*	n	*noon.*
Β ϐ β	*βῆτα*	b	*bay.*	*Ξ ξ*	*ξῖ*	cs	*axis.*
Γ γ Ґ	*γάμμα*	g, ng	*giving.*	*Ο ο*	*ŏ μικρόν*	ŏ	*obey.*
Δ ∂	*δέλτα*	d	*dell.*	*Π π ϖ*	*πι*	p	*pea.*
Ε ε	*ἒ ψῑλόν*	ĕ	*epsom.*	*Ρ ρ[ῥ]*	*ῥω*	r	[rh as in Welsh.]
Ζ ζ	*ζῆτα*	zd	*wisdom.*	*Σ σ ς*	*σίγμα*	s	*seek.*
Η η	*ἦτα*	ē	*there.*	*Τ τ ϯ*	*ταῦ*	t	*tower.*
Θ θ ϑ	*θῆτα*	th	*thin.*	*Υ υ*	*ŭ ψιλόν*	y	[Danish *y*.]
Ι ι	*ἰῶτα*	i	*field.*	*Φ ϕ φ*	*φι*	ph	
Κ κ	*κάππα*	c	*cap.*	*Χ χ*	*χῖ*	ch	[German.]
Λ λ	*λάμβδα*	l	*lamb.*	*Ψ ψ ϟ*	*ψι*	ps, bs,	*eclipse, robson.*
Μ μ	*μύ*	m	*moon.*	*Ω ω*	*ὦ μέγα*	ō	*ōwn.*

114*a*. Ου, *ου*, *u*, properly a diphthong like *o-w* in no-*w*onder, which should be preserved. At an early period it was pronounced both by Greeks and Romans, like French *ou*, Latin U, the *oo* in *fool.*

115. ʻ SPIRITUS ASPER (rough breathing,) English *h*, placed over the second character of diphthongs or digraphs, as *οὐ where*, read *hō-w* or *hoo*. *The* (ʼ) spīrĭtŭs lēnĭs (smooth breathing) indicates the absence of the rough breathing, as in the English *owe*. It is not indicated in inscriptions.

115*a*. *As it is hardly possible* to commence a word with a vowel, without allowing a little inaudible breath to pass before the vocal ligaments begin to vibrate, this, as Chavée suggests, may be the smooth breathing.

116. *As* zd *has the single character* z,* so its cognate *st* is sometimes written with a single letter, as in *ἄζρον* or *ἄστρον* (a star.) In writing the Doric and Eolic dialects, ζ was replaced by σδ, as if the double sound varied from that in wis*d*om to that in mis*d*eed. The character σ is used, except as a final, to which ς is restricted, as in *σοφός*, (wise.)

* See Haldeman. Investigation of the power of the Greek *Z* by means of Phonetic laws.—*Phonetic Journal*, Sept. 24, 1853.

117. *The characters* E, H, P, X, have not the same power in Greek and Latin, which causes great inconvenience, and tends to prohibit the use of the proper Greek characters, for manuscript forms, most of which arose in the 7–10th centuries.* This difficulty should be removed by using ε or ϵ, for which authority may be found in Greg. Placent. p. 106, plate; and in the ELEMENTA EPIGRAPHICES GRAECAE of Franz, Berlin, 1840, p. 245 below. P should have the upper projection cut away, the angle rounded (*P*,) and the curve thick above, and tapering downwards. H might have the Coptic form (H) and (X) would be nearly the Coptic χ.

118. *Γ, γ, ſ,* before *γ, κ, ξ, χ,* has the proper of *ng* in *sing* or *n* in *ancle, angle,* as in *ἄſκυλος* (curved,) Latin angŭlŭs (an angle.) Words like *sing* cannot be represented in Greek and Latin, because the *ng* sound is not made except in connection with a following guttural. In these pages *ſ* will be used for the nasal sound.

119. *φ* is written with *ph* in the Roman alphabet. It differs from F in not being made by the lower lip and the upper teeth, but by the contact of both lips, as in blowing.

120. V *was originally a Greek letter* with the power of *ooze*, and from this the later Y, *ϒ* (French *u*) seems to have been formed, either to indicate the pursing of the lips by the contraction of the base, or to show its relation to I. *ϒ* had not the pinched sound of French *u* in the Eolic dialect, nor as the second element of the labial diphthongs; hence *αυ* agrees with English *ow* and German *au*, in *brown, braun.*

121. *Diphthongs, αι* as in *a*isle; or like *o-y* in go-*y*e; *ωι* the same lengthened; *ει* like *e-y* in get-*y*e; *ηι* the same lengthened; and in all cases, the first element has its proper power.

ACCENT.

122. *The accent of Greek* differs from that of Latin in falling upon the last syllable, as well as upon the second and third from the end. There are three varieties, the acute (ˊ) and grave (ˋ) used with long and short syllables, but the grave restricted to finals; and the circumflex, (ˆ ˜) which is a union of the others, used with long final or penultimate syllables.

123. *The acute accent* indicates the chief stress, the grave a secondary one. A word bearing an acute accent on a final syllable, may have it changed to a grave in the middle of a sentence (as being weaker among other syllables,) although the acute would be preserved at the close, as in the English sentence (writing *detain* in Greek characters) "*I*

*See EPITOME GRAECAE PALAEOGRAPHIAE ET DE RECTA GRAECI SERMONIS PRONUNCIATIONE DISSERTATIO AVCTORE R. P. D. GREGORIO PLACENTINIO, ROMAE, MD. CC. XXXV. This work is abundantly illustrated with figures.

† Haldeman, Proc. Amer. Acad., 1849, p. 171; Castanis, The Greek Exile, Philad., 1854, p. 246; E. A. Sophocles, Greek Alphabet, 1854, p. 113—14.

will not διτὴν *ény longer*, I will not διτήν. So the second syllable of *renéwed* is acute compared with the first, but if we say "buds are *renèwed* évery spring," it becomes grave in comparison with the acute accent of *every*.

124. *In strict accuracy*, the acute accent seems to have been rather at the end of the vowel or syllable, the grave at the *beginning*, and the circumflex in the middle, corresponding respectively to the *crescendo* <, the *diminuendo* >, and the *swell* <> in music. The following are offered as English approximations:—sèa-dog, séed-ing, strài-ning, caraván, caravànsery, câreful, èlecampáne, ùndêviáting, ùncònstitûtionálity, ìncontêstibílity.

125. *As English has sounds* unknown to the Greeks and Romans, it would be difficult to find a line of English which they could represent or read correctly if written in their alphabets. For example—

"The proper study of mankind is man,"

....ι	πρ..πρ	στ..δ..	..	μ..νχαινδ	..	μ..ν—
DHI	PR..PR	ST..D..	..	M..NCÆND	..	M..N—

cannot be written, because the power of *th* in *the*, the vowels of *study*, the vowel and *v* in *of*, the vowel and *z* sound of *is*, have no proper characters, and the existing ones do not allow of the English latitude of power. Similarly, the line—Those things *h*anging *with*in—contains but four letters (O, H, V, and final N) which would be written and read by a Roman in this connection. In the following examples, the Greek, Latin and English elements are nearly identic.

arm	hold	pure	bind	hero	cone	scheme	town	sweet	useful	wine	fed
ἀρμ	ὁλδ	πιυρ	βαινδ	ἵρω	κων	σκιμ	ταυν	σιιτ	ιούσ..υλ	ιιαιν	..εδ
ARM	HOLD	PJUR	BÆND	HIRO	CON	SCIM	TAVN	SVIT	JUSFUL	VÆN	F..D

Here, the Greek ι, υ, being properly vowels, πιυρ and σιιτ admit of being read as dissyllables, so that they are not true representatives of *pure*, *sweet*, nor would the Latin forms have been, before the modern separation of I,J, and V,U.

THE DIGAMMA.

126. *The inconvenience of one letter* for the sounds of *ooze* and *well*, although not felt by some who have proposed English alphabets, was appreciated to some extent by the ancients. The sixth Hebrew letter *wow* (in *wound* from *wind*) was represented in archaic Greek by the 'digamma' Ϝ (the original of the Roman F,) and it is possible that in some dialects this had the power of German W and Ellenic (Romaic) *β*, the sonant of *φ* §119, that is, a consonant akin to English *v*, but made with the lips alone.

127. *W is the proper character* for this aspirate B, it was made for it, and is still in extensive use as its representative. "W is of German origin, and occurs first in the name of Witiges, anno 536, on coins."—Kraitsir's Glossology, p. 98.

128. *The elements of woo are sequents* in English and Latin, as in *wool*, VVLTVRNVS, but not in Greek, where they would be likely to be submitted to a naturalising process akin to that which produced the three forms—English *wolf* (=Ang. Vulf,) German *wolf*, and Swedish *ulf*. This process would be used with caution in proper names, which some would naturalise and others present in their true pronunciation. Except in the case termination, Λυ'κιος is a genuine transliteration of LVCIVS; Τύλλιος and Βῆρος are naturalised forms of TVLLIVS and VERVS, the former with French *u*, the latter with *b*, an interchange (English *b*, *w*,) which is common in Sanscrit. But Greek *β*, *ϝ*, *υ*, are no more identic than English *b*, *w*, and German *w*, in the proper name Weltzhoover, which is pronounced in these three modes (and sometimes written and printed with *b*,) in Maryland and Pennsylvania.

129. *We can now account for* the want of uniformity in the Greek orthography of Latin names, such as—

VALERIVS		Οὐαλέριος		Βαλέριος
SEVERVS	Σεούηρος	Σεϝῆρος	Σευῆρος	Σεβῆρος
FLAVIVS		Φλαούϊος	Φλαύιος	Φλάβιος
NERVA		Νερούας		Νέρβας
VARRO		Οὐάρρων		Βαρρων
AVRELIVS	Λὐρήλιος		ARISTOBVLVS	Αριστοϐυλος
OCTAVIVS	Οκταούϊος		TIBVR	Τιβυρα
IVLIVS	Ιούλιος		LIVIVS	Λιϐιος
VVLTVRNVS	Οὐουλτοῦρνος		VERRES	Βέρρης

130. *Appreciating the inaccuracy* of seeming to string four or five vowels in a line (V being *oo*,) the Romans sometimes used the digamma inverted (to keep it distinct from their F,) writing OCTAⅎIAE, SERⅎVS (the modern SERVUS,) and the like, to be seen in inscriptions. Dialectically, this ⅎ may have had the power of German *w* (Spanish *b* between vowels,) as we find BERVM for VERVM.

131. *There was probably a Spanish dialect* of Latin paralleled by an Ellenic dialect of Greek, an Arabic dialect of Hebrew, and a Sanscrit dialect of some unknown original. For, in some cases, a language pure in the morning, may have sloughed off a dialectic ulcer in the afternoon of the same day, and the organs which could open sufficiently for *brig* and *kin* in summer, might close to the aperture required for *bridge* and *chin*, when opposed to the blasts of winter.

132. *The greatest corruptions occur* when the language instinct has become enervated. Then *sixt* is perverted to "sixth," although forbidden by a law of the language. Then some one may say "of like" for *alike*, as "almost" is said for *amost* (perhaps an old dative akin to the German *am meisten*,) and "out of doors" for *out adoors*—mistaking for a plural sign the adverbial -s of *towards*, *whence*, *since*, *twice*, *else*, VIX, BIS, *δις*, *ἄψ* (backwards,) the *υ* of *αὖ* (back) becoming *π* or *φ*, as in Ellenic. Compare *λαῦρος* and *λᾶϊρος* (violent.)

CHAPTER VI.

THE ANGLISH ALPHABET.

With all the prejudices of an antiquarian taste, and an eye long familiar with the form in which the words had been accustomed to be read, in what has been called the Anglo-Saxon character, and with the difficulty of recognising the same words when presented in a different dress, it required a strong reason to justify the rejection of the old letters. Nothing but a thorough conviction that the Roman character would be the most legible, and would best show the identity of the present English with Anglo-Saxon, as well as the clear analogy existing in the words of all the other Germanic languages, would have led to the adoption of this type. *Bosworth*, Dictionary of the Anglo-Saxon language, London, 1838, p. clxxi.

§ 133. *Anglish orthography is nearly like* that of Latin and German. The characters differ somewhat from the Roman, which are frequently used instead. The letters are a, b, c, ƀ, e, ꝼ, ȝ, h, ı, l, m, n, o, p, ꝑ, ꝛ, ꝛ, ꝥ, ð, u, ꝼ, ẏ.

134. A as in ārm, ărt, and probably as in fāll, whăt. Compare smál *small;* stál a *stall;* fram *from;* nat *not.*

135. Cay always pure, as in Latin. Compare corn *corn;* cirnel *kirnel;* cepan *keep;* brocen *broken;* ceac *keg, cag;* ece *ache;* cennan *ken;* cynn (Irish cine) *kin;* cyning (old German cuninc) *king;* citte *kit;* cealf *calf;* cinne, cinn (old German cinni and kinne) *chin;* cild (old German cind, kind,) *child.*

136. ϵ, e, in thēy, mĕt; æ as in făt. Compare fætt *fat;* ðæt *that;* æpl *apple;* hæbbe *have;* bænd *band;* ꝼæȝn *wagon.* Care should be taken never to use æ for this letter, but (if the proper type is not at hand) to file off the right hand side of the Roman letter. This would form the basis of a good letter for the vowel in *fat;* whilst the use of the unaltered Roman letter would tend to corrupt Latin.

137. F, (u at a later period probably as in o*f*, *v*ine (its Welsh power.) Compare ofer, ouer, *over;* efen *even;* lufe, luue, loue, *love;* hafe, haue, *have;* fefer *fever;* fif *five;* fers *a verse;* ff as in *off*, its Welsh power. In Belgian, *v* often replaces English *f*, which is a Devonshire peculiarity. Compare

Belgian,	*Anglish,*	*English,*	*German.*
voet	fot	foot	fuss
vloer	flor	floor	flur
vrij	freo	free	frei
geven	gifan	give	geben.

138. Gay pure, as in *get, give.* In gear *year;* gearn *yarn;* geolca *yolk;* geolo *yellow;* ciorl *churl;* cealf *calf;* the element after the initial is probably English *y*, which remained in the English *yolk* after the *g* was lost. Some regard *ge* as equivalent to English *y*, but as 'guard' is, (or was) provincially *gyard*, and 'cow' is *cyow;* Anglish geard (a *yard, gard*-en) was probably *gyard*, or in Latin letters—GJARD.

139. O perhaps as in *not*. Compare the double Anglish forms mon and man, lond and land, sond and sand.

140. S, ſ, doubtful; perhaps pure in some dialects, in others as in zeal, misery, a Somerset (zomerzet) and Devonshire form.

141. Þ as in *th*in. The Greek θ, θ, may be subtituted, or ϯ.

142. Ð, ð, as in *th*en. When this type is wanting, ɑ may be substituted. The sonant and surd *th* were interchangeable to such an extent in the various dialects, that the letters of both fell into English *th*, with which Anglish words are often written without taking the difference into account.*

143. ƿ English *w*, and represented by both *w* and *v*, but as the letter is a manuscript and italic form of Latin V, with the second line turned into the stem† and as it has no connection with Germanic W, *v* is its proper representative.

The following may be compared, in which the Gothic initial probably agrees with the others.

Latin,	*Gothic,*	*Anglish,*	*English.*
VENTUS	vinds	ƿind	wind =vɪnd
VELLUS	vulla	ƿul	wool =vʊl
VIDUA	viduvo	ƿidƿa	widow=vɪdo
VOLO	viljan	ƿyllan	will =vɪl
VERMIS	vaurms	ƿorm	worm =vʊɐm

144. *Dr. Bosworth virtually admits* the necessity of measuring languages by the same alphabet—sounds by the same letters; but his use of W (where Diefenbach, Ḱaltschmidt, and others use V,) removes Anglish from Latin and gives it a forced and unreal resemblance to German. On the other hand, some will have 'cinn' read like *chin*, to bring it down to the English level, by removing it from its cognates, the Belg. kin, Gothic kinnus, Greek γένυς, &c. The Latin V is used in the next examples—

Latin,	*Anglish,*	*English.*
VAD-ERE	vad-an	wad-e =ved
VOLV-ERE	vealov-ian	wallow =vɒlo
VAST-ARE	vest-an	wast-e =vest.

145. Y, ẏ, has its proper power of French *u*, German ü. The dot indicates nothing. It is not placed over the small *i*. 146. cs is preferred to *x*, and cƿ to *qu*.

147. In the change from Anglish to English, the derived language often retained old forms which were allowed to become corrupt in the original. The English *wagon* is older than the Anglish ƿaen, (as if *wine?*) whence *wain;* and the modern *rain* is precisely the Anglish 'ren,' a corruption of 'regn.'

*The English use of *th* for two sounds recalls the Greek double letters, which had different powers in different dialects; ξ being κς or χς; ψ, πς, βς, φς; and ζ, *zd*, *sd*. Without a similar reason, the Greeks would hardly have used such an unphilosophic mode of writing.

†See Emman. Thesauri, Inscriptiones; Coloniæ Brandenb. 1671, p. 414, and many old books.

CHAPTER VII.

ORGANS OF THE VOICE.

Ce qui doit encore résulter de ces considérations . . . . . c'est l'admiration qu'inspire ce mécanisme merveilleux du plus parfait de tous les instrumens, l'organe de la voix. Ah! sans doute, il a pour auteur le plus parfait de tous les artistes. —*Abbé Sicard.*

§ 148. *The larynx is the organ of voice.* It is composed of five yielding cartilages united by ligaments, and various muscles, forming a mass at the head of the trachea or windpipe, of which it is a continuation. Although large enough externally to render the front of the neck more or less prominent, the larynx is reduced within to a narrow opening, extending front and back, named the glottal fissure (rĭma glŏttĭdis.)

149. *Each side of the glottal fissure* has an elastic band with the inner edge (next the fissure) free, and the outer edge, as well as the ends attached to the cartilaginous framework. These bands are the vocal ligaments; they have no independent power of vibration, but are as passive as the reed of a clarinet, until acted upon by a current of air. Their tension and length vary in speech and song, but they are never quite relaxed.

150. *When the larynx is in repose,* as in ordinary breathing, the glottal fissure is widest at its posterior end. In this condition there is no vibration, even with increase of breath; to cause vibration, and consequently voice, the glottis must be narrowed to a uniform slit, (Willis.) *The singing voice* is due to a greater approximation of the vocal ligaments than is required in speech. (Faber, inventor of the speaking and singing machine, in a verbal communication.) In *falsetto* singing, the extreme edges alone vibrate. (Johann Müller.)

151. *The parallelism of the vocal cords* is the effect of volition, and is chiefly due to the action of two triangular cartilages (the arytenoid,) the anterior angles of which approach each other, and the cords with them. As every sonant element of speech requires the parallelism of the vocal cords, and every surd avoids it, there is a continual quiver of closing and opening, which can be viewed in the throat of some birds; and as eight syllables (like *pity, Popocatapetl,*) can be pronounced in a second, there are sixteen motions in this short space of time, not like the unappreciated trills of the tongue, but controlled and individualised by the speaker. This is about double the rapidity of the motion of the eyelids.

ORGANS OF SPEECH.

152. *The mouth and nose* act on the voice or breath proceeding from the glottis, by means of the lips, teeth, tongue, palate (roof of the mouth,) and its continuation, the soft

palate, or palatal veil, which bears the uvula, and acts as a valve to close and open the nasal passage posteriorly.

153. *The pharynx is the cavity of the throat* behind the uvula. It extends up to the posterior nasal passages, and is concerned in modifying the vowels.

CHAPTER VIII.

THE ELEMENTS.

At the present day, in physics and chemistry, we have no longer theorists in the sense of the schools of the last century. . . . . Such men are indeed still to be found, but only in those departments of science which have not yet acquired a truly scientific foundation; and in which, partly for convenience, partly from a deficiency of logic, such speculations are tolerated.—*Liebig*, Principles of Agricultural Chemistry, 1855.

§ 154. *This chapter being introductory* to the succeeding one on the Phases of Words, its subject is not treated fully, but will be resumed farther on. In the mean time, the words "diphthong" and "coalescent" will be used, although the English syllables *oy*, *I*, *ou*, as a vowel followed by a consonant, have no more right to a special name than the syllable *odd*. *Capital letters* will be used with their Latin (or Greek) power—others as in English, unless there is a statement to the contrary.

155. *The old division of the elements* into two classes (vowels and consonants) is philosophic and proper. Those systems are unphilosophic which make three classes for vowels, sonant consonants, and surd consonants; or which separate a class or order of sibilants; or include *l*, *m*, in an order of liquids.

156. *Vowels* (vōcālĭs *vocal, sonorous,*) *are made* of the uninterrupted voice, the distinctions between them being due to slight modifications, chiefly of the cavity of the mouth and pharynx. Vowels are *pure* (or normal;) *nasal*, as some of the French, Portuguese, and Polish vowels are; *whispered*, of which some of the aboriginal American languages afforded examples; *independent* (of expiration, inspiration, or voice,) being a vowel effect succeeding a clack; and *glottal*, in which the vowel is accompanied by a scraping effect along the rather close glottis. Its type is the Hebrew and Arabic *ain*.

157. *Consonants are the result* of interrupting the vocalised or unvocalised breath. Their quality depends upon the point where the interruption is made, and upon the nature and extent of the interruption. They are classified according to the points of contact where they are modified or interrupted.

158. *The consonants of web, whip,* and the vowels in *ore, ooze,* belong to the labial contact; those of *five* to the labio-dental; *th*in *th*en to the lingui-dental; *debt, lean,* to the

dental or basi-dental; seize to what may be called the *sigmal* contact (from the Greek letter, and from σιγμὸς a hissing,) for *s* has more affinity with *t* than with *sh*, which, with *zh*, belong to the palatal contact. The guttural contact is formed by the back part of the tongue and palate, as in *young*, *cag*. The vowels in *pique*, *vein*, are guttural vowels. The glottal contact seems to be formed at the glottis, as in *hoe*. There are several glottal consonants in Hebrew and Arabic. The *epiglottis* is passive, without muscles, and it is not an organ of speech, as some have asserted.

159. *The fundamental elements* are the (Latin) vowels U, A, I, and the consonants (mutes) P, T, Cay, corresponding to the *lips*, *palate* and *throat*, or to the *outer*, *middle* and *inner* parts of the mouth. When the contacts are half open, a series of intermediate consonant sounds result, which may be called liquids. These three kinds are related as represented in the diagram, the *affinities* running vertically, and the analogies horizontally, but as P, T, are equally close, and as A is much more open—more of a vowel than U—the affinity between A and L or R is much less than between U and V, still greater is the distance from A to T, compared with U to P.

Vowels	U	A	I
Liquids	V	L	J
Mutes	P	T	Cay

160. *The primary vowels*, in natural order are

OU A EI, or IE A OU,

and in forming them mechanically, if a tube of a certain length produces U, it must be shortened for O, and so on to I, which requires to be shortened the most. A is the type of the vowels—the natural vowel—and the most agreeable of the whole. Closing the organs from A towards the throat, E and I will be formed: if towards the lips, O and U.

161. *Two complementary vowels* are wanted to occupy the spaces on each side of A, which are greater than those between OU, and between EI. These are *awe*, between A and O, (formed on Faber's speaking machine by touching the O and A keys simultaneously,) and *urn* on the throat side, between A and E, from the latter of which it is more commonly derived. Some, on the faith of mechanical experiments, locate *urn* between O and U, thus making it a labial—a view which would vitiate philological deductions. Mr. Ellis would prefer *at* between A and E.

162. *The secondary vowels* are modifications of the primary and complementary ones, formed by a different aperture, and commonly, but not necessarily short. They occur long, whilst the primaries may become short and abrupt, or staccatoed. Any vowel is here considered secondary whose place is between those already named, as *bit*, *bet*, *bat*, *bot*, *but*, *full*. If *naught* and *not* differed only in length, the two would constitute but

one vowel, and it is worthy of notice, that whilst the secondary not has a *closer* aperture than its primary n*au*ght, the secondary them is more *open* than its primary th*ey*. But this seeming law would disappear with a change in our conventional nomenclature, if, for example, we were to consider f*oo*t the primary and f*oo*l the secondary. The following is a comparison of lip and throat vowels of about the same degree upon each side of the scale:

*o*dd	*a*dd
*o*we	there
o-bey	them
. . .	they
f*oo*l	h*i*s
f*oo*t	h*e*

COALESCENTS.

163. *The labial vowel oo*ze readily becomes the consonant *w*ay, and between them there is a shade of sound allied to both, but a variety of the latter, and a consonant, because it has the power of forming a single syllable with a vowel, which two vowels cannot do. Hence to connect I A U into a monosyllable, the extremes must be consonanted, making JAV (yow,) and the result is similar if the order is changed, as in AJV, JVA, &c. Conceiving the coalescents to be vowels, the ancient grammarians adopted the word *diphthong* to account for two vowels forming one syllable. The labial coalescent is represented by *u*, *w*, in English, as in writing—out, house, mouse, (German aus, haus, maus.)

164. *The guttural vowel pique* may become the guttural liquid *y*ea, as in min*i*on, and between the two lies the guttural coalescent in a*i*sle, e*y*e, bo*y*. The consonant relation of the coalescents is shown in the combinations ho*w* *w*ell, m*y* *y*ears, in which it is difficult to tell where the coalescent ends. A comparison of the former (or how-ell) with hâ-well and the latter (or my-ears) with mâ-years, will show their affinity.

165. *A coalescent between vowels* is apt to form a fulcrum by becoming a more complete consonant. Compare (emp)*loyer* with *lawyer*. Hence the Romans, who wrote AE before a consonant in GRÆC-I (Greeks,) used their I consonant when the cay was omitted, or a vowel followed, as in GRAJI (a dissyllable,) for GRÆI.

166. *In English, the guttural coalescent* is preceded by the vowel of *aisle* (varying dialectically to *a*t and *u*p,*) that of *oil, boy;* and of *full*, as in *buoy*, pronounced *boo-y* by fishermen, &c., but sometimes corrupted with -oy. The labial coalescent occurs after the same French â of *aisle*, as in *now* (varying dialectically to *a*t, *u*p,) *Faust, saur-kraut.* But

*The vowel of *up* is the normal sound according to Wallis, Wilkins, Franklin, Pitman and Ellis. The last uses it concurrently with *ai*, as in *Isaiah*, with *ui* (up) initial, and *ai* (aye) medial, and he says (MS.) that the second syllable of this word is pronounced with *ai* in *ail* "only by dissenting, i. e. non-university clergymen." I was told by Greeks at the Propaganda that in the island of Syra the Catholics say *tyee* or *thee*, and the schismatics *kyee* for *si*—the latter being nearest the true form.

u (you) does not contain it, except where English has been influenced by Belgian and Welsh, and then *u* is read with the initial vowel of *it*, or nearly as *yw* detached from Brand*yw*ine. This is used in New York, and is adopted by Dr. Comstock.

167. *From the superficial analysis* given by the English orthoepists, it is generally impossible to determine whether any particular one placed the consonant of English *u* first (*yoo*,) or last (*iw*,) because the notation was some form of *i-u* or *ee-oo* on both sides; and as the reader was expected to compress them into one syllable, this would be done according to vernacular practice, so that *the same* authority would be cited to justify several modes of pronunciation, and a pronouncing dictionary be the chief means of preventing uniformity by encouraging provincial variation, even among those anxious to conform to some standard. With Antrim, ''twill' (it will) is *too ill;* with Webster and Knowles, 'well' is *oo-el;* Walker, Knowles, and Comstock* make 'coil' identical with *caw ill*, as if *claw-ey* and *cloy* were identic. Yet we have recently heard a child of three and a half years old make the distinction, saying 'boy' for *boy*, and 'bo-y' for *little boy*, using 'girly' as a diminutive in the same sentence. *Bawy* (monosyllable?) for *boy* is given by Halliwell.

168. *Dièresis* is a change from a coalescent to its allied vowel, in pronouncing a diphthong as a dissyllable. It is commonly marked by (¨) two dots—an unphilosophic mode, because the coalescent and the vowel are different elements, each of which should have its letter. The mark may be used to separate syllables, as when *prairie* is pronounced

*"A Treatise on Phonology: comprising a Perfect Alphabet for the English Language; a specimen exhibition of the absurdities of our present system of orthography; Comstock's, Pitman's, and the Cincinnati alphabet, contrasted; a Lecture on Phonetics by Prof. M'Laine; the Pamphoneticon, and recommendations of Comstock's Alphabet. By Andrew Comstock, M. D., second edition, Philadelphia, 1855.

a. This work contains about thirty pages of recommendations from clergymen, editors, superintendents and controllers of public education, college professors, &c. These recommendations are valuable, as showing the extent to which the *educated classes* of the United States are dissatisfied with the ordinary mode of spelling English. They say in a note—"We do not here wish to be understood as referring to Pitman's *Short Hand* Alphabet. His *Phonography* as he calls it, though not strictly *phonetic*, is admitted to be the best system of short hand which has yet been devised."

b. The author says (p. 15)—"If the Roman alphabet be taken as a basis on which to found a phonetic alphabet, its letters should be so appropriated that they may be conveniently used in all the languages in which the Roman alphabet is employed. This has been done in the present instance: for the author was aware that if his alphabet were not so construed as to suit the European languages, *it would not be adapted to the English language.* Every linguist must see this."

c. Unfortunately, whilst he uses e in *they* and *e* in *them* correctly, he has new characters for the vowels of *field, filled;* he perverts I to *ai* in *aisle*, C to *sh*, J to *zh*, and Q to *wh;* and he uses U as in *full*, u in *up*, and O in *on*.

d. Alphabets of this kind show that when authors depart from the Latin and true etymologic basis, there can be no agreement upon the amount or kind of corruption which shall be sanctioned, because there can be no rule formed which shall justify *mine* and condemn *yours*—adopt certain double letters proposed by *me*, and reject such as *you* propose. Thus Dr. Comstock intimates (p. 59) that the Italians will never discard A, yet he does not hesitate to deprive them of I.

pr¨airie in three syllables, or *road* dilated into r¨ode, making *summerode* (sumr¨ode,) out of *some road*, su¨dnly or sud¨nly out of sudn¨ly, prism¨atic out of pri¨smatic, &c. The words batl¨ing, butn¨ing, have three syllables, and ban¨tling two, but most persons would write the latter bant¨ling, guided by the etymologic rather than the phonetic syllabication. In these cases the separating mark is required but once, because *sudn* cannot be made a monosyllable as long as 'n' is *n*.

169. *The finals* in batl, batr, banr, sudn, prism, &c., are not essentially different, (*l*, *r*, have more aperture,) from those of *fall*, *bar*, *den*, *aim*, and they do not require to be marked to indicate the formation of syllable without vowels, except in rare cases, as in § 168. The Grebo has a word *m* (five,) Chinese has *m* (aunt) and *ng* (five) as in *sing*, and if we write *may* and *aim* with 'm' why not *m* with the *ay* or (*ai*) omitted? Bohemian has consonant syllables, as drt *sawdust*, smrt *death*, blk *fire*, blb *a clown*, frk *foam*, &c.

170. *The following are old Nordish*—akr *acre*, backstr *a baking* (a proper name in English,) aftr *after*, fĭngr *finger*, bitr *biting*, eign *own*, gagn *gain*, gegn *against*, öxl *shoulder*, öxn *oxen*, āvalr *bowed*, fullr *full*, greipr *crooked*, armr *arm*, flatr *flat*, arligr *early*, and many more, which would probably be admitted as English forms, were it not that grammarians have been accustomed to use the note of exclamation when discussing syllables without vowels. This, and poetic orthographies like Heav'n, sev'n (which no writing can monosyllabise,) may have fostered the use of the apostrophe, as if there were something present in the nature of a vowel. But that something (*n* or *vn*) is equally present in *nv*, *nva*, *vna*.

171. *But this attention to syllables* is neglected in the dissyllables pat, tap, the final unwritten breath of which (pa-t', tap', bad', bug$^{k'}$,) makes a syllable with the antecedent consonant, a fact which is partially recognised by the more rhythmic and delicate French ear. The Chinese word for *six* is precisely the English word *luck*, but it is a monosyllable, the breath being retained by the closed organs, making luck'.—*Hald.*, Proceedings of the Am. Acad., 1842, p. 175.

172. *Synèresis* is the change of a guttural or labial vowel into a coalescent. It is usually regarded as the union of two vowels into a diphthong, which implies an impossibility. It may be indicated by (¦) a reversed dièresis mark, as in the Latin PENNA¦E, with the dots superimposed. The coalescent letters should be formed on a consonant basis, as in A¦JL for *aisle*, and A¦VL for *owl*. A consonant basis will give to languages like Latin and Greek, *a vowel to every syllable.*

173. *The separation of the coalescents* from the vowels, being quite modern, their difference is seldom recognised in alphabets. *This is a grave defect.*

CONSONANTS.

174. *If the lips are partially closed* from the U *oo* position, we get the aperture for the initial of *way*, represented by *w* in English, V in Latin, and *u* in Italian and Spanish. It does not occur in German, and has a doubtful place in French; where, according to Olivier, (Sons de la Parole, p. 171,) it occurs *in careless speech*, in the words *oui, ouest, ouate*. Being half interrupted, we will call it a liquid. It has an audible sound, so that it is also sonant.

175. *If we give w an accession* of breath, unaccompanied by voice (the vocal ligaments not being parallel,) it will become *wh*, which has the qualities named *surd* (from its want of vocality) and aspirate, from its hissing sound. The Romans applied the term LENIS (soft) to the quality of an unaspirate consonant. (This and several allied terms are adopted from Latham.) If, instead of forming the liquid *way*, the lips be closed upon the issuing voice, the sonant *bay* will result if the voice is heard, and the surd *pay* if it is checked.

176. *If the ventages of a clarinet* are stopped, and the end or bell be suddenly closed upon the issuing sound, the vibration is checked; and if the vocal passage were made of an unyielding material, *b, d,* and *gay could not be formed*, as the close of the organs would prevent the passage of air over the vocal ligaments. The absence or rarity of these sounds in some languages may be due to rigidity in the organs of speech.*

177. *The word 'surd' nearly corresponds* to whispered, but is distinct. In whispering, the murmur of breath through the larynx is heard, and if *b* is the whispered element, it continues until the mouth is filled with air, whilst *p* is not continuous, the organs being rigid. In whispering vowels, the organs are in the normal speaking condition, except that the vocal ligaments are not allowed to become parallel.

178. *A sonant element often indicates* a verb in English, and its surd a noun, as in prove proof; breathe breath; live life; braze brass; ūse ŭse; refūse réfuse. Hence, when *hold* is a noun, it is popularly pronounced *holt*, and *hilt* is authorised.

179. *Sonant elements being longer* than surd ones, the length is in some degree transferred to a preceding vowel, as in rōad rŏte; bōne bŏat; bāde băte; lēague lĕek; rōbe rŏpe; in which *bait* and *leek* are as short as *bat* and *lick*.

180. *On account of the additional effort* required to make the vocal ligaments parallel, and perhaps to furnish breath for *b, d, gay*, beyond what is required for *p, t, cay*, the latter must be considered the most typical, natural, and the earlier. But Grimm, (Geschichte der Deutschen Sprache, 1853, chap. xv.) gives the preference to *b, d, gay*.

* As the mouth of speaking birds is unlike that of man, it is probable that the absence of articulation in the apes is not due to the anatomical peculiarities commonly mentioned, but to the want of *a speaking brain* to guide the tongue and lips toward articulation, as the hand is guided in the imitation of human actions. We have promulgated this view in lectures and among cultivators of science for twenty or twenty-five years.

181. *The effort to produce vocality* may perhaps be transferred from the glottis to the contacts, so that instead of *b, d, gay,* a modified *p, t, cay* will occur, made with the points of contact (as the lips) flattened against each other, producing what we call a *flat* sound —to be indicated by heavier-faced (**p, t, c,**) types. They occur in German, in the aboriginal languages of America, as Cherokee, and we place the **t** in the Arabic word Vâh**e**t (one.) The ear takes cognizance of the sound, and the German word **t**od (death,) perhaps differs as much from the English *toad* as their syllable *will* differs from *will;* but the Englishman and Frenchman think the effect a kind of *d.** *D, t,* (b p, g c,) *are* in fact often confounded, but the explanation given here is based upon a vernacular acquaintance with the phenomenon.

182. *That the flat p, t, cay do not require* more force of breath than *p, t, cay,* may be thus proved. Take a tubulate retort holding about half a pint, and partly filled with water; let the stopper be replaced with a glass tube passed through a perforated cork; then by blowing through the neck, the water will rise in the tube, and indicate the amount of pressure, and this we have found to be about the same for the two kinds of *p.* The apparatus may be varied by inserting two tubes through the cork of a bottle, one of them bent at right angles, or made of gum.

183. *If a slight crevice* is left between the lips in closing to *b,* the result is the Spanish *b* between vowels, as in Còrdŏbă, a sound associated with 'w' in German, where the orthography would be *Cordowa.* If this *bh* is made surd, it becomes Greek *phi.* If instead of the lips, the lower lip and upper teeth are used, we get English *v,* or if surd, English and Latin *f* will be formed.

184. *The quality of ph, f, &c. is aspirate, of bh, v, &c. vocal aspirate,* but as some view this as a contradiction of terms, *spirant* (Rapp's term) may be used instead.† Nevertheless, if *f* or *s* is alternately made *v* or *z,* an attentive ear can distinguish the hiss of the former through the vocality of the latter.

185. *It is not possible to breathe* when the organs are in the *b, p,* position, because the nasal passage is closed by the palatal veil: if this be opened, as in breathing, and voice

* "Whence is it that the Spaniards and Gascons confound *b* with *v,* that the Germans scarcely distinguish between *k* and *g* hard, *d* and *t, b* and *p,* and that in their orthography they often use one or other indifferently?

"We once had a long discussion with an educated Iroquois, to determine whether a certain sound of his language was *k* or *g* hard, whether one should pronounce *Ganadayé* (village) or *Kanadayé.* The discussion was long, and we finally decided in favor of *k*. . . The missionaries used these letters indifferently in their printed books. Zeisberger frankly admits in his Lénâpé [Lɛnāpɛ] primer, that his printer, running short of *k,* was obliged to substitute *g.* Zeisberger was a German."—*Duponceau,* Mém. sur le Syst. Grammat. des Langues Indiennes. Paris, 1838, p. 99, 100.

† Wilkins (Real Character, London, 1668, p. 367,) uses the term *incrassated.* This table of the elements, p. 358, is worthy of examination.

be emitted, the result is a nasal *b*, that is, an *m;* and if *m* be treated like *w* to produce *wh, surd aspirate mh* will result, heard in what Dr. Rush calls the "symbol of a sneer," and written *hem!* in English, and *hm* in German. But this aspirate *m* is followed by a true sonant *m* (*mhm*) as *wh* in English is always followed by a true *w*, *when* being made up of the four sounds wh-w-e-n. See § 41 *a*, 4th paradox. To this *mhm* Lepsius (Alphabet p. 27) wrongly assigns the vowel in *up*, with its resonance "lost by partially contracting the mouth or *even closing it entirely*, in the latter case it is heard through the nose." He would mark it with a minute circle below *m*, probably the final one—or both.

NOTATION OF NASALITY.

186. *Nasal vowels and consonants do not differ* more than their pure originals differ. The Latin final in TAM, TUM, was not M, but a nasal sign for the vowels, Verrius Flaccus wrote it with half its letter N. It is sometimes omitted in Inscriptions, and Manutius (Orthographiae Ratio, Venetiis, 1566, p. 143,) gives an inscription beginning with the line—

LVXURIANTE . ANIMO . POENU

where the 'm' is indicated by a superior line, the small letters e, u, being probably used because marked capitals were wanting. This is common in old printing as in "—durabit mundus sub Meschia duob. millibus annorū, and postea reuertetur ad informē suā speciē." *Sebastian Munster*, Evang. Hebr. Lat. Basileæ, 1582, p. 66. The old printers used it for *n* also. The Portuguese adopted this notation, as in õ, and it is used by Rapp and Lepsius; italic *m* is used by Max Müller, as in a*m;* which Ellis would write an *aa*, or aA; Eichhoff AN the *n* finishing with a minute circle; Féline Ekritur Fonetik, Paris, 1852, a̲.

187. *A consonant is suggested* by forms like a*n*, a*m*, where the effect is strictly a vowel; and they indicate a local etymology, which is as bad as writing no*ch*t for *not;* for *in many languages nasal vowels cannot be traced to an antecedent consonant.* The missionary—says Max Müller, p. xx, lxxxi, "should be guided entirely by ear, without paying any regard to etymological considerations, which are too apt to mislead even the most accomplished scholar." "In a first attempt to fix a spoken language. . . . the writer should not be swayed by any hasty etymological considerations."*

188. *The indication of nasality* by a superior (˜) usurps the space which some will require for the marks of length, and others for accentuals; and every nasal thus marked

* Of course then we cannot write *au* for *o* with Eichhoff, to accommodate a Sanscrit phase; nor *ai* for French è with Volney (Simplification, p. 41,) for the "precious advantage" of representing certain Arabic plurals by reversing the characters, as in *dair* a house, *diâr* houses. This would be paralleled in music, by writing the notes CG instead of the intermediate E.

requires an additional type. Duponceau preferred the Polish mode, which arose out of the early Latin typography, in which a flourish was sometimes thrown down, and towards the right, much like an inverted comma point. This point will be used in these pages, producing forms like i, e, a, o, u, y, &c.

189. *If a nasal vowel* is properly represented by an ordinary vowel character and a nasal sign, the notation of *m* and *n* is unphilosophic, but not that of *ng* (except in its duplicity,) if the *n* is a nasal sign to the *gay*. If su^{n}g (suG,) spells *sung*, su^{n}d (sud,) is *sun*, and su^{n}b (sub,) is *sum;* or if bõ, bo, are the French *bon*, b̃ õ, b,o, are *mon*.

190. *An analysis of the system* of articulate sounds requires that the possible amount of consonant variation should be determined, and this will be attempted for the labials (the action of the lips being most readily identified by touch and sight,) after which the results can be applied to other parts of the vocal organism.

191. *This inquiry has important bearings* on the investigation of languages, because the theoretic knowledge that a sound is possible, will assist us in identifying it from the obscurities of imperfect description. *a.* Thus the accounts which the ancient grammarians give of their *phi* are sufficiently clear to the modern who has inferred the existence of such a sound; (*b.*) and the relations of a peculiar Albanian sonant aspirate *n*, (No. 2 of the scheme § 193*a.*, 483,) were detected when the sound was heard in nature.

192. *Six phases have been mentioned*, surd and sonant, lenis and aspirate, oral and nasal. Several of these may occur simultaneously, but not surd and sonant, nor (in most cases) lenis and aspirate. In the common alphabet, when b is surd, it is written p, but surd or whispered *w* or *m* cannot be represented; and whilst *h* in *bh* does not destroy the vocality of *b*, it renders *mh*, *rh*, *lh*, surd. We want, therefore, the means of representing sonant and surd, independently of aspiration. In the examples to be given in the sequel, the Greek aspiration and accent marks will be used together, but the latter should be filed away to a uniform thickness, to distinguish them from accent marks, which are tapering. Thus

᾽ means lenis-surd,
῾ " aspirate-surd,
᾽ " lenis-sonant.
῾ " aspirate-sonant.
῾ " aspiration through the mouth, as ῾l for lh.
῾ " aspiration through the nose, as ῾m for mh.
῾῾ " " through nose and mouth simultaneously.

193. *The following scheme* indicates *eight* mutes and as many possible liquids; eight lenis forms, each of which may be aspirated; eight that are pure or oral, each of which

may be nasalised; and eight sonants, each of which may be voiceless. To these might be added the coalescents as modified by nasality, aspiration, or whisper. To prevent confusion from so many minute marks, the lenis are here neglected, and the sonant and surd phases have the additional indication of heavy and light letters respectively.

198 *a*. SCHEME OF CONSONANT PHASES.

INTERRUPTION.												
little	nasal	sonant	lenis	1	$w_{\cdot}$	.	.	.	.	$l_{\cdot}$	.	.	.	.	$r_{\cdot}$
			asper	2	$^{o}w_{\cdot}$	.	.	.	.	$^{o}l_{\cdot}$					
		surd	lenis	3	$w_{\cdot}$	.	.	.	.	$l_{\cdot}$					
			aspor	4	$^{o}w_{\cdot}$	.	.	.	.	$^{o}l_{\cdot}$					
	pure	sonant	lenis	5	$w_{\cdot}$	.	.	.	.	l	.	.	.	.	r
			asper	6	$^{o}w_{\cdot}$	.	.	.	.	lh	.	.	.	.	rh
		surd	lenis	7	$w_{\cdot}$	.	.	.	.	l	.	.	.	.	r
			asper	8	$^{o}w_{\cdot}$	=	wh	.	.	lh	.	.	.	.	rh
much	nasal	sonant	lenis	1′	$b_{\cdot}$	=	m			n	.	.	.	.	ᵹ?
			asper	2′	$^{o}b_{\cdot}$	=	(ʻm)			ʻn Albanian.					
		surd	lenis	3′	$p_{\cdot}$	=	m			n					
			asper	4′	$^{o}p_{\cdot}$	=	(ʻm)			ʻn Cherokee.					
	pure	sonant	lenis	5′	b	.	.	.	.	d					
			asper	6′	^{h}b	.	.	dh			.	.	.	.	ƶ
		surd	lenis	7′	p	.	.	.	.	t					
			asper	8′	^{o}p	=	φ	th			.	.	.	.	s

194. *We are here shown*, that however proper "ph" and "th" may be to indicate a kind of *h* modified at the points *p* and *t*, this notation is entirely inappropriate in *mh;* for as *ph* breaks the labial barrier of *p*, *mh* should do the same for the nasal element *m*. Producing a sound modified by air passing from the lips, *mh* should mean ($v_{\cdot}$) a nasal *v*, or rather, a nasal German *w*, for *m* means a nasal, and *h* a mouth aspiration of it. $B_{\cdot}$ is strictly *m*, $p_{\cdot}$ the same (ʷm) whispered, ʻm does not distinguish between sonant and surd, nor $bh_{\cdot}$ or $ʻb_{\cdot}$ between oral and nasal. The latter might be read with the lips closed or open, if not restricted to an oral phase.

195. *We require an aspiration mark* for the mouth, as employed in the Greek ῾, and another (ʻ) for the nasal phase, which we will name *afflatus*, this being one of the Latin terms for aspiration. In the preceding scheme, mute 2′ is a sonant nasal aspirate; and were the aspirate mark inverted (ʻ) it would be equivalent to ʻm sonant afflate. But the increased breath necessary to aspirate the former would drive the air through the nostrils, so that in most cases there would be both aspiration and afflatus.

196. *Theoretic elements*, like nasal bh, ph, v, f, lh, rh, would probably be inconvenient in speech, on account of the effort required to drive voice or breath through the two apertures, and the nice adaptation of mouth to distribute the current between the two. *a*. It is worthy of remark, that when the liquids and nasal mutes are surd, they are likely to become aspirate.

197. *The liquids do not include* the nasal mutes *m, n, ng*, although on a cursory view, a table like the following, which would associate *l, m, n, r*, would satisfy most grammarians.

Voice Interrupted, { little, { liquids, w, l, r, y. / nasals, m, n, (r,) ng. } much, mutes, p, b, f, t, &c. }

This is incorrect, because, if *n* as a nasal *d*, is to be thrown out of the mutes into another division, we must throw a nasal *l* out of the liquids to form still another. For the existence or non-existence of such an *l* in nature, has nothing to do with the question of arrangement. But Medhurst (Dict. p. xxxii) mentions such a sound in Chinese—"when it is joined to a nasal final, the power of the *l* is in a great measure merged in the nasal, in which case it acquires a sound something similar to *n*." This l, is liquid No. 1 in the scheme. "*Kw*"*a* is the same with the 20th final *kwa*, only pronounced with a strong nasal termination, as if written *koo-w*"*a*." Medhurst p. xxxv. This seems to be w, No. 1 of the scheme. Böhtlingk mentions a nasal of German J. Compare Albanian njĭ, (one) a nasal syllable.

198. *In the dental column*, No. 6 is a vocal aspirate lh, which we attribute provisionally to Irish, its surd cognate being in Welsh. In the next column there is a Sanscrit letter which should probably be located farther back than *r, s*. It may have been a French *j* nasal affiate ('j,) No. 2 of the palatal contact.

199. *According to the description* of Sir Wm. Jones,* the cerebral *D* can hardly be a pure mute, for—"When the tongue is inverted with a slight vibratory motion, it has a mixture of the ra, with which it is often, but incorrectly confounded." Colonel Vans Kennedy† observes that cerebral *T* "is peculiar to the Sanscrit alphabet, and in sound partakes of *d* and *r*." The effect of such a sound would recall a vocal sonant untrilled *r*, but with Mr. Ellis, we think these descriptions unsatisfactory.

*On the Orthography of Asiatick words, Asiatic Researches, London 1801, vol. 1. The following is an extract from p. 33:—"Agreeably to the preceding analysis of letters, if I were to adopt a new mode of *English* orthography, I should write Addison's description of the angel in the following manner, distinguishing the *simple breathing*, or first elements, which we cannot invariably omit, by a perpendicular line over the first or second vowel." (In 'sm' for *some*, and 'sch' *such*, the vowel is understood after s, as in Sanscrit.)

"So hwen sm énjel, bai divain cămánd
Widh raisiṅ tempests shécs a gilti land,
Sch az ăv lét ór pél Britanya pást,
Cálm and sirín hi draivz dhi fyúryas blást,
And, plís'd dh' ălmaitiz ărders tu perfórm,
Raids in dhi hwerlwind and dairects dhi stărm."

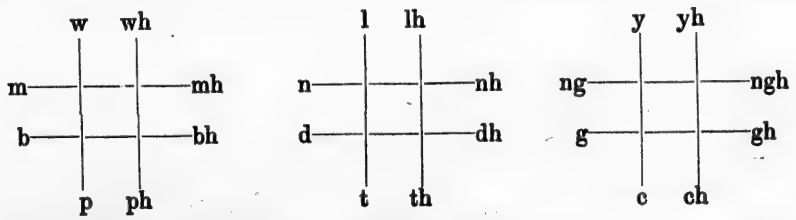
†The same author thinks that Sanscrit *dsh, tsh*, becoming y, and that *sh* became Greek *k* and Persian *kh*—thus taking, as we believe, the younger for the older, and reversing the course of the transmutation.

200. *If Welsh rh is made sonant,* it will bear considerable resemblance to Slavonic *rz** which, in Bohemian is both sonant and surd, although unacknowledged. It is a trilled *r* with a concurrent buz very like French *j*—itself the aspirate of some variety of *d*. The hypothesis is here offered, that this sound is due to an attempt to vocalise *rh*, and it is acknowledged to be a philologic analogue of *r*, as in Polish, Rzym *Rome*, Bohemian, R'egor' *Gregory*, Bedr'ich *Frederic*.

201. *In the consonant scheme* of the Penny Cyclopædia, (1833, Vol. I, p. 380, by Prof. T. H. Key,) b, bh, p, ph, are arranged around the bottom of a cube, one at each angle; the dentals around the middle, and the gutturals around the top; so that *d* is above *b*, and *cay* above *d*, the letters on the angles being

b	p	d	t	g	c
bh	ph	dh	th	gh	ch = χ

The silibants are arranged in an independent class, and the "liquids" *r, l, m, n,*—a very objectionable arrangement, for the omitted *wh* and *ng* are as important as *ph* and *n;* and *ph, f, th, s, sh,* form a regular gradation of aspirates going back from the lips. An octagonal figure would have given several better arrangements, of which the following is one—



* A fact first noticed (Jan. 29th, 1858,) whilst constructing the foregoing scheme for this essay, and trying the vocal effect of its constituents. Mr. Ellis (MS.) calls attention to the following relations, the sounds represented above *z* and *zh* being sonant—

rh	*rh*	*srh*	*zrh*
s	*z*	*sh*	*zh*

CHAPTER IX.

PHASES OF WORDS.

Copious even to excess, as is the literary labor of our age, and ever seeking new topics, new methods of verifying old ones; there are yet subjects to be found, either not touched upon at all, or scantily and incidentally treated, without due regard to their proper value. In the great domain of natural history and the physical sciences, the rapid growth of knowledge, and its subjection to new laws and generalisations, have created the need of *fresh divisions* in every part; of *altered nomenclature*, and *particular treatises* on topics, the increasing importance of which compels this separation.—*Edinburgh Review.*

202. *The elements thus far discussed* afford sufficient material for an elucidation of the mode of their employment in speech, and the causes which influence the physiognomy of words. Several chapters will now be devoted to the phonetic and etymologic subject of the Phases of Words. *There are four phases of words—Metáthesis*, or transposition; *Epénthesis*, or increase; *E'cthesis*, or elision; and *Anáthesis*, or mutation.

METATHESIS.

203. *Rapidity of utterance requires* that in pronouncing the sequents LA, LI, PL-, PR-, the cavity of the mouth must be set for A, I, before the L is formed, and the tongue be placed for L, R, before the P is formed, as in saying pl-ay, ta-bl; pr-ay, ta-pr. This may cause the elements to be displaced, that which should be last getting the first place, by a *physical* process. This is partially recognised in Sanscrit orthography, where *tig* (to strike) is written with the vowel character preceding that for *t*, as if *itg*, but read *tig*.

204. *The mental image of a word* being a whole, and its broken elements and syllables a succession of parts, these may be confounded in the emission by a *mental* process—an accident of a kind which sometimes happens in writing. We adopt the mark (×) used by Dr. Tschirschnitz* to indicate metathesis. The following are examples: Ang. brid, a bird; acsian and ascian, to ask; Eng. dial. gers, grass.

Croatian,	strok	krap	mleko	brada.
	×	×	×	×
English,	stork	carp	milk	beard.

EPENTHESIS.

205. *Epenthesis is the lengthening* of a word, as by the use of affixes, whether prefixes or suffixes. *Ne-ar* is an old comparative meaning *more nigh*, but the suffix being forgotten, the word acquired a positive sense, with a double comparative in ne-ar-er. In old high German, sacc-lin-chin is a double diminutive of sack; and esel-in-chi-l-in may be a triple

* Natûrkunde der ſprâchlaute dârstellend das wörterreich der deütschen ſprache nâch lauten und begriffen natûrwissenschaftlich begründet und geordnet. Breslau, 1841. 800 pp. 8vo.

or quadruple diminutive of *ass*, although it is more probable that *in* (in one or both cases) is a feminine sign.

206. *A consonant is sometimes inserted* as a fulcrum between vowels, as in witti-c-ism, ego-t-ism, *μη-χ-έτι*, or a vowel between consonants, as in the Hauaian piladel-e-pia for Philadel*phi*a. Among the causes of epenthesis are *cyclesis*, *eduction*, and *induction*. Other causes will be mentioned in later chapters.

CYCLESIS.

207. *In withdrawing the tongue from the palate*, if it is done with a cycloidal motion, like unrolling it from the tip backwards, *t* may be followed by an inserted *s*, as in German, or by *sh*, as in English; and *d* may be followed by English *z*, as in Italian, or by French *j*. Germans and Italians are so accustomed to it that they corrupt Latin with an imaginary *s* after pure *t* in words like nāt-i-o (nation,) lēct-i-o (a choosing,) reading *natsio* and *lectsio*.

EDUCTION.

208. *As the opening of the nasal passage* turns D into N, if in saying *ten* this passage is closed before the voice is stopped, 'tend' will result; and from tĕnĕr and gĕnŭs (gĕnĕr-is,) tender and gender are formed by the eduction of *d* from *u*. In lantern from lātērnă, the nasal passage is allowed to open before the *t*, forming *n*, as *b* gives rise to *m* in străbo, Ital. strambo. Other examples are, number, tremble, lend, salt, thimble, remember, contempt, consumption. Latin hŭMĭLĭs, Eng. humble, Spanish humilde. In the French pivoine, *v* is educed from *o;* and CAMPHORA gives the German kampfer by *eduction*, and the Slavonic ka*f*er by the *absorption* of *m*. German pfeffer (pepper,) pfad (path,) &c. Greek Sappho, Bacchus, Matthew.

209. *Educed elements are not inserted* in the sense that *n* is inserted in AlbaNcella, anciently Albocella; or the *d* in a(d)vance, or *r* in t(r)easury, vag(r)ant, Ta(r)tar, as these are not due to the mechanical action of the organs.

210. *In examining Spanish*, we find I introduced in a few words, as in *viento* (wind,) from vēntŭs. If we compare Spanish words in ve- with those in vi-, we find that the latter exceed the former somewhat in number, so that the change might be attributed to the influence or *induction* of a larger upon a smaller class. But on comparing other Spanish words, as *tiempo* (time,) from tēmpŭs; *piel* from pēllĭs (a skin;) *diente* from dēntĭs (of a tooth;) we find that the forms in te-, pe-, de-, greatly exceed those in ti-, pi-, di-.

211. *In forming the syllable* PE-, if the mouth be not set soon enough for the E, the aperture will be that of I, which sound will be interposed (as in these examples) as an eduction from E. In the same manner, on the labial side of the vowel scale, U is educed from O, as in passing from Latin to Italian in sŏnus *suono* (sound,) sŏrŏr *suore* (sister,)

hŏmo *uomo* (man.) In nŏvus *nuovo* (new,) the Spanish form is *nuevo*, where, after the eduction, the O passed by transcession to E. Compare cōrpŭs *cuerpo*, bŏnus *bueno*, † FONTE* *fuente*. In cŏrĭūm (a hide,) Italian *cuojo*, U is educed from O, *r* is elided, and *i* closes to its liquid congener.

212. *Eduction may preserve the length of a word*, and be spontaneously used for this purpose when the loss of a consonant would shorten it, as in Latin † CORDE (heart) Italian *cuore;* CORIUM *cuojo*, &c.

213. *The French inverse diphthong oi* probably arose eductively after labials, as in *poire* (pear,) which is nearly *pwar*, or in Latin letters PV'AR; *voie* (a road,) *pois* (pea, *s* silent,) *quoi* (what,) *moine* (monk,) *moins* (less,) =MV'X, with *a* in *at* nasal; *bois* (wood,) *foie* (liver.) After being thus formed, the use of this *oi* would be extended, as in *oindre* (to anoint,) =V'A,DR̆; *croitre* (to grow,) =CRV'ATR̆.†

INDUCTION.

214. *Induction is the influence* of larger classes of words upon smaller ones, causing uniformity, and regularity in grammatic inflections. It may lengthen, shorten, or otherwise vary words. Thus *clift* is formed from *cliff* by the induction of words like *lift, drift*, which exceed those in *-iff*. Similarly, the -tion termination carries with it *ocean* and *physician;* -idge of carriage, marriage, porridge, controls the old English -age termination once heard in selvage, garbage, baggage, privilege, &c., and dotard, wisard, &c., have induced Spaniard, and the vulgar scholard.

215. *Italian prefers English y* to *l* in certain places, and introduces it instead, as in plūmbū^{m} (lead) *piombo;* plănus (plain) *piāno*, Spanish *llano* (LJANO, dropping *p*,) Neapolitan *chiano*, with a *cay*, not transmuted from the *p* of *piano*, but educed from the J.

216. *Alliteration is a variety of induction* in which an element suggests its repetition, as in pēRdīx, Fr. pe*r*d*r*ix, Eng. pa*r*t*r*idge; Latin amiTa, Fr. *ta^{n}te*; Eng. pitapat, slipslop, &c.

217. *Reduplication* is a variety of alliteration common in Greek, and less so in Latin.

218. *There is an apparent interchange* of initial E and S between French and English, which cannot be accounted for on any theory of the elements. It occurs in

étrange	épagneul	épeler	ete^{n}dard	écosse
strange	spaniel	spell	standard	scotland

* It is often necessary to use and indicate the inflection of a word, and a mark (†) will be adopted for this purpose, in which the little directing branch is directed towards the *graph* (glyph) or written word. Dialectic forms will be marked with (†) an allied figure, the directing mark being turned away, as in *curds*, † *cruds*. It is often inconvenient to give the meanings of illustrative words, and deceptive to allow one meaning to stand for several cognates, hence the mark (↓) will indicate that the meaning of several cognates is not quite identic, as in *beam*, German ↓*baum*—meaning *tree*. These marks are made from the dagger of the printers.

† This view, that *o* in *oie* is a coalescent, wants confirmation, as, from want of opportunity, it has not been examined in nature for ten years.

In comparing the first pair with the Latin original ēxtrānĕus, we find that *es* of EX has been elided from the French, and *ec* from the English form, so that this apparent interchange is an example of *elision*. But this will not account for the next forms.

219. *In Spanish* (which differs from Italian in this feature) initial S is not followed by some consonants (f, p, v, m, l, n, d, g, c, q); but as *es* followed by *c* &c. is a common initial combination, there is a feeling that the initial S in SC-, &c., ought to make a distinct syllable, a feeling which is realised by prefixing *e-*, whence † scōrpĭōn-ĭs became *escorpion*, spĕcĭēs *especie*, &c.

220. *This incompatibility* of certain sequents occurs to a less extent in French, in which, although words commencing with sp-, sc-, st-, exist, there is a tendency to prefix E-, forming ésp-, ésc-,ést-, and the syllable being attained, the next tendency is to get rid of the S, which was an unstable element, even in Latin. This accounts for the following French forms, none of which are examples of a transmutation of S to E.

spĕcĭēs	stómăchus	spīrĭtus	stăbulū[m]
espèce	estomac	esprit	é..tab[le]

Hungarian has *o* similarly prefixed in *ostoba* (stupid) and *oskola* (school,) adapted from the Latin.

CHAPTER X.

ELISION.

Such a renovation and extension of the reform of philosophy appears to belong peculiarly to our own time. We may discern no few or doubtful presages of its approach; and an attempt to give form and connexion to the elements of such a scheme cannot now be considered premature.—*Whewell*, Pref. to Hist. of the Inductive Sciences.

§ 221. *Elision is a prominent agent* in breaking up by an *organic* process, the forms of words as built up by a *mental* process, and it causes much difficulty in etymologic investigations. In Anglish it causes *al* to mean an *awl* and an *eel*, by reducing the Latin AcuLa and AngvĭLla to the same dimensions. The German *zettel* (= tætl) as a *note* or billet, is cut down from sCIDuLa, and as the *chain* or warp in weaving—from CATEnuLa a little (cătēnă) chain, preserved also in the German *kette*.

222. *Some nations reject* parts of words which others retain, causing differences in languages of the same stock, as Welsh and Irish. The English *four*, Welsh pédwar (*e* in *met*, Eng. *w*) and Irish cáthar (each *a* in *at*,) bear so little resemblance to each other, that without their history, it would be rash to consider them cognates. They are, moreover, cited

erroneously for the transmutation of *cay* and *p*, as Italian *piano* and Neapolitan *chiano* (kiano, § 215) might be cited for the same purpose.* The English triliteral FOR *four*, stands in the Latin QVATUOR; Welsh takes a different portion—QVATVOR; whilst Irish claims the initial—QvATvOR.

223. *The Latin* QVINQVE *is older* than the Sanscrit and Zend *pantshan* (five.) It gives the Welsh *pymp*, Aeolic Greek *πέμπε* (by turning N to M through the influence of P formed from V,) and *πέντε*, probably the newer form. QVINQVE also gives the Irish *cuig* (as in *coo, ig*-nite,) which on account of retaining both gutturals, is purer than the Welsh and Greek forms. These relations will appear in the following tables, where *ʃ* is to be read as English *sh*.

Latin	Q V A T U O R		Q V I N Q V E
Irish	c .. a *θ* .. a r		c u i .. g .. ..
Lithuanian . . .	k .. e t u .. r i		.. p e n k .. i
Ceylonese	h .. a t .. a r ay		.. p a .. h .. ay
Sanscrit	tʃ .. a t u a r		.. p a .. tʃ .. an
Armenian	tʃ .. .. .. ü ö r .. s		h .. ɪ ʊ c .. ..
Persian	tʃ .. ä h .. a r ..		.. p e n tʃ .. ..
Bengalee	tʃ .. ā .. .. .. r ɪ		.. p a .. tʃ .. ..
Wallachian . . .	.. p ā t .. .. r ū		tʃ .. ɪ n tʃ .. ..
Welsh	.. p e d w a r ..		.. p y m .. p ..
Gothic	.. f i d v o r ..		.. f i m .. f ..
Greek	†τ .. é ττ .. a ρ ε ς		.. π é μ .. π ε
"	†.. π í σ υ .. ρ ε ς		.. π é ν τ .. ε
Albanian	c .. ā t .. .. r ..		.. p ɛ .. s .. ..
Oscan	.. P E T .. O R A		.. P O M T .. I S
Old French . . .	.. p e t .. o r	Fr.	c .. i[n] .. q

224. *The Latin is the oldest* of these forms of *four*, and next the Irish and Lithuanian. The Sanscrit form is old only in its vowels, in which it is equalled by the modern Persian, which has an anomalous *h* probably arising from a transmutation of aspirates. Of *five*, the Latin form is the oldest, and next the Irish and Lithuanian. The Lithuanian *keturi* (four) takes the *guttural* in the first syllable, like the Irish, and in the second the labial,

* "The interchange of *s* with *h*, and of *k* with *p*, are the most striking cases. . . . There are scarcely any words in Irish which begin with *p*, . . . and it is no less observable, that a considerable number of these words, whose initial in the British language is a *p*, begin in Irish with a *k*, or as they constantly write it, with a *c*."—*Winning's* Manual of Comparative Philology, London, 1838, p. 128–9.

† For the transmutation of *cay* to *t*, compare Doric *Τεῖνος*, Ionic *Κεῖνος* (he, that;) Latin PASCERE, French paiTre, to pasture. The Pehlvi, Hindustani, Deccan, Gudzherat, Mahratta, and Gipsy forms, closely resemble the Persian.

like the Welsh. In the first syllable of *penki* (five) it takes the labial with the Welsh, and in the second the guttural with the Irish.*

225. *The Latin* QVI (who) is *pwy* in Welsh (with *p* educed from *w*,) and CI in Irish, Persian, Turkish, Hungarian, French (qui,) and Italian (chi.) Latin EQ..VUS, CAB-ALLUS (horse) Welsh *eb-ol*, English *cob*, Gr. ἵππος and ἵκκος, Irish ăch. The Latin ăqvă gives the Sanscrit *ăp*, the Rhaetian and local Spanish *aua*, the Austrian *ach*, Lettish *akka* and Welsh *ach* and *aw*. The Sanscrit *prat'hamas* (first) gives the Greek πρῶτος and Latin PRIMUS: and Latin TEMPUS gives to English *time* and *tense* (through old French *temps*,) the *m* being assimilated to *n* by the influence of *s*.

226. *In comparing Latin and its cognate* the ancient Oscan, we find that the latter rejected the guttural in similar cases, and used P instead of V;—NEQUE nep; QVOS pus; QVAM pam; QVIDDAM pidum; QVIS pis; QVI piei. (*Mommsen*, Oskische Studien, 1845–6.)

227. *The nature of the relation* between the German *blei* and English *lead* may be understood from the following table:

Greek	μ	ο	λ	υ	β	δ	ο	ς	
Latin	P	..	L	U	mB	..	U[m]		*m* educed from B.
English	b	..	l	o	m	..	a		whence a *bloom* of metal.
Polish	..	o	l	o	v	..	..		
Welsh	p	..	l	w	m	..	..		
Danish	b	..	l	y	..	..	..		and *lod* a plummet.
German	b	..	l	ei	..	..	..		
English	..	..	l	ea	..	d	..		*lode, plumb, plummet.*†

There is a Greek form *μόλιβδος*, probably newer, because the V (of the Latin form) is seldom derivable from I, but often from Y.

228. *Absorption* (eisèresis) is the reverse of eduction, and is a kind of elision in which an element is lost when two belonging to the same contact occur together. Thus *l* has been absorbed by *d* in *solder*, and *m* by *p* in the Spanish *copilar* from the Latin original of *compile*.

* "The combinations gu-, khu-, or gw-, khw-, require investigation phonetically. Why should a labial after a guttural be easy? simply because of the ease of preparation, the lips being quite free in the first. But why insert a labial between the guttural and vowel? I think in some cases to keep the guttural from palatisation,—*khwi* running no chance of falling into *kjhi*. In other cases, it may be that the lips leaving the throat free, the vowel is more readily prepared. When the mouth is used to this combination, it takes to it readily. Thus *bhelf* becomes *guelf*, but why does *bhaiblíng* become *gibellīn'* and not *guibellīn'*?—You assume the double form to have been the more ancient; but here we have a known case of the double form being more recent; and a case of the single guttural being more recent than the single labial. I think the conclusions of § 224 are therefore hazardous."—*Ellis*, MS. *note*.

† In all such cases as the last two, Mr. J. P. Lesley thinks the analogy maintained by the loss of a labial from between the vowels; he therefore reads b..le..i, le..ad, and considers the full or typical form to have been *μολυβ(α)δος*. Proceed. Am. Phil. Soc., Vol. VII. p. 134. In the Old English of the Legenda Aurea, the metal *lead* stands 'leed,'=LED, and *led* as 'ledde.'

CHAPTER XI.

MUTATION.

La forme des mots varie, leur essence ne varie jamais.—*Baron de Merian.*

§ 229. *Anáthesis or Mutation* is the replacement of one element by another. It is of four kinds:—1, Intermutation; 2, Commutation; 3, Permutation; and 4, Transmutation.

230. *Intermutation* is the interchange of vowels, which may take place in three modes, namely: by

Precession, a moving forwards,
Recession, a moving backwards; and
Transcession, a moving across.

231. *Precession* (›) is a vowel change from a more open to a closer position of the organs, towards the lips or throat. The term is adopted from Crosby's Greek Grammar.

232. *Recession* (marked ‹) is the reverse of precession, and is much less common. It is the change from one vowel to another on the same side of the vowel scale, as from Latin URSUS (a bear) to Spanish OsO; Latin DIGITUS, Spanish dEdO; Latin MIRABILIS, French mErveille, English mArvel; Latin LINGVA, Spanish lEngua, French lA^{n}gue.

233. *Transcession* (marked ×) is the interchange of lip and throat vowels across the vowel scale, as between U and I in *food, feed;* O, E, in English *snow,* German *schnee* (=ʃnE;) Latin BONUS (good) BENE (well.) It may be combined with precession (×›) as in passing from O to I, (a rare phase as in *roll, reel; dole, deal;* German *ohr,* English *ear;*) and from E to U; or with recession (× ‹) as in passing from I to O, and from U to E, these three phases being extremely rare.

234. *Anallaxis* is the change from *one* element to *two* others, one of which stands on each side of it. As E stands between A and I (§ 238) it may happen that in the attempt to produce it, the organs may fall successively into the positions on each side of it, producing A-I, or (in case the I is coalesced) Æ, as in the German *mehr schnee* (more snow) which becomes *mai schnai* in low Suabian.* The following are examples from ancient and modern geographical names, assuming that the derived forms have been diphthongal at some period—

EBEILINU^{m} Baillo, BETHSAN Baïson, MENTESA Bentaez.

235. *Upon the labial side,* O becomes A-U or AV, as in SONUS *sound;* old Suab. lob, German *laub;* Ger. korn, melōne, Austrian *kaurn, melaun;** French bo^{n}té, English *bounty;*

* Wocher, Allgemeine Phonologie, Stuttgart, 1841, p. 244–5.

English bow and *bow*, and in the Irish dialect of English, where bold, hold, cold, &c., become *bould*, &c., influenced by *l*.

236. *Reversed anallaxis* appears in the Swedish JAG compared with Latin EGO (I,) and in the modern IAlea, from the ancient ELÆA. The following are Rhaetian examples—

TERRA tIAra *earth*, vERMIS vIArm *worm*, vESPA vIAspra *wasp*.

"Some words that might be supposed to be under Wa [English *w*, *a* in *far*,] are to be found under O, as the syllable *wa* is often pronounced like *o*, and *o* like *wa*." (*Baraga*, Otshipwe Dictionary.) The latter (*o*+–*wa*, § 245,) is an example of reversed anallaxis, the former (*wa*+–*o*) of metallaxis.

237. *Metallaxis* is the replacement of *two* elements by *one* that is intermediate, being the reverse of anallaxis. It occurs in passing from AI to E and from AU to O, as in Latin BALÆNA, Italian balEna (a whale,) Latin CA'VSA, (a cause,) Italian cOsa, French chOse; Latin CA'VDEX and COdex (a stem.)

238. *The following tables* of the affinities of the primary vowels may be used in studying intermutation. In the second one the complementary vowels are placed; in the third, the close of the organs to French *u* is indicated, and the probable manner in which the letter Y was suggested from its relations to the vowels V (*oo*) and I.

A*rm*

O*we* v*Ein*

p*Ull* *mach*I*ne*

A

a*we* u*rn*

O E

U I

A O V Y

E I

239. *Intermutation* being mostly in the closing direction, when U and I are reached, the recession continuing, U may become the labial, and I the guttural coalescent. But let the vowel of the German *kuh* (coo, a cow) be closed to English *w*, and the result (cw in qu-een) is hardly pronounceable until *a vowel is interposed*, when the English form *cow* appears.

240. *If* I *be closed upon* sufficiently to form the guttural coalescent, this must be aided in a similar manner by a vowel, for coalescents appear in no other manner in English. Hence the French *cri*, thus treated becomes *cry*, (that is, in Latin letters CRÆ,) *by precession and epenthesis*, not by anallaxis.

* Castelli, Wörterbuch der Mundart in Oesterreich unter der Enns. Wien, 1847, p. 13.

241. *The coalescent is the principal* element of a diphthong. In Ellenic (Modern Greek) αυ has been closed to αφ and α῾β, consequently it has no coalescent, and consequently it is not a diphthong.

242. *There is a limit to intermutation,* so that it is hardly possible to find an example of a departure from A to O and U, and a return through I and E to A, and a circuit in the opposite direction would be still more difficult.

243. *As* A῾V *can return* to O, and A῾J to E by metallaxis; and as the former can become U and the latter I by the loss of A; the triplets O, U, AV, and E, I, AJ, furnish two sets of elements which circulate among themselves, apart from the more open vowels. They may be tabulated thus:—

O E

AV U I AJ

These relations, and those of Y and German ö are shown in the next diagram.

A

O ö E

AV U Y I AJ

244. *Anallaxis is older than metallaxis,* and vowels precede diphthongs, so that when both occur in cognate words, those with a vowel may be considered the older, although immediately derived from diphthongs. Thus, although the Spanish *col* and French *chou* (cabbage) are derived from the Latin cāvlĭs (a stalk, cabbage,) and Greek *καυλὸς* (a stem,) the original vowel was A, as in the Sanscrit rălă5 (a stem) the initial of which is less old than the *cay* of the other forms.

245. MARKS OF MUTATION.

++ indicates an interchange, as O++U, P++B.

+– or –+ is placed between a derivation and its primary, the crossed end indicating the root, or earlier form. † indicates a primary, a genuine form, or a true root.

ǂ indicates a false original, as in ǂ*shine*, +–*shone*, where *shine* is not the true original whence *shone* is derived; one or both having come from an earlier form. The Greek ǂ*κλάζω* (to make a noise) is not the true original of *clang*, *clank*, because the gutturals of these are older than the palatal ζ. The following are examples of precession.

246. 1. Sanscrit DVA; 2. Danish tO, Irish and Persian do, old English twō; 3. English two (too;) 4 old Nordish tvau; 2′ Belgian twEe; 3′ German zwIe-, Lettish diwi; 4′ German zwei.

4	3	2	1	2′	3′	4′
			DVA			
		to		twoe		
	two				zwie	
tvau						zwei

247. 1. Sanscrit dAnta (a tooth;) 2. Anglish tOth; 3. Greek *ὀδοὺς* Gothic tUnθus, Eng. tooth;—2′. Latin DENS; 3′. Turkish DIŞ (deesh;) Eng. tine, in Latin letters TÆN.

4	3	2	1	2′	3′	4′
			dAnta			
		tOθ		DENS		
	tUθ				DIŞ.	
—						TÆN

248. *If we pronounce ov* of the Greek form like *ou* in *round*, the word, as far as this part is concerned, will occupy the fourth place of the labial side, and be a newer word than *tooth*, which is newer than *toth*, although the use of *o* in spelling *tooth*, might cause one ignorant of the sound, to suppose the Anglish and English forms to be of equal age.

249. *Precession is commonly confined* to one side of the vowel scale, as in most of the following examples.

A ← O ← U ← AV.

Latin frātĕr (a brother) Gothic brOθar; German brUder; Welsh brawd.

Latin sānus (sane =SEN;) Belg. zOnd; Angl., Dan. sUnd; Eng. sound, with *d* educed from *n*. Latin pălūs; Isl. POL, Ang. PUL a *pool*.

Lat., Sp., Ital., cŏrO͝nă, Belg. krOon; Rhaetian, crUnna; Eng. cr*own*.

250. A ← O ← U ← I

Here U, instead of becoming AV, crosses to I. Latin fA͝gus; Angl. bOc; Ger. bUche; Eng. beech. The Rhaetian *fau* is from FAGUS by elision.

Latin illO͝c, illUc, illIc (thither.)

251. A ← E ← I ← Æ.

Latin ălA͝cĕr; Fr. lE′ger; Sp. lIgero; Eng. light (active.)

Ang. nAther; Old Eng. nEther; Eng. neIther; and (vulgarly, as if) nigh-ther.

Isl. badi (both,) old high German bethe; old Fris. bide; German beide.

252. *A regular transition* has occurred in English from A thorough E to I, and the secondary vowel of *it*. This is shown by the fact, that the character 'A, a, *a*,' used throughout the world with its proper power in *arm*, *far*, has in English acquired the power and name of the European 'E,' this in its turn has been confounded with the European 'I,' which, by a similar perversion, has become the partial representative of an epenthetic A.

253. *The following are examples* of Latin words passing through French to English:—

pāx	paix	peace	răcēmŭs	raisⁿ	raIsin
ăqvĭlă	aigle	eagle	† rătĭōn-ĭs	raisoⁿ	reason
trăctārĕ	traiter	treat	dŏmĭnārĕ	dominer	domineer
sătĭo	saisoⁿ	season	fāctūᵐ	fait	feat
măcĕr	maigre	meagre	clārūs	clair, †clér	clear
ācĕr	aigre	eagre	bālātūᵐ	O. Ger. blēat	bleat.

Old Ger. slafan, Goth. slēpan, Eng. sleep, =SLIP. Ger. bārt, Ang. bērd, Eng. beard, =BIRD. Latin GRAVIS, Rhaetian grēv, Eng. grave, grIeve. O. French spare, Ang. spēre, O. Fris. spiri, Eng. spear. Ger. bahre, Fr. bière, Eng. bier, =BIR. Latin CLAVIS, Fr. cle*f* =CLE, Persian kelid, Hung. kults, Eng. key, =CI. Sp. vinagre, Fr. vinaigre, Eng. vinegar. Latin strātă vĭă, Old Eng. street, =STRET, Eng. street, =STRIT.

254. *The apologists of English spelling* will observe, that these English words with I, derived from an original A through an *ai* or *e* spelling, follow neither, but represent the derived I sound in the six modes *ai, ea, ee, e-e, ie, ey*:—raIsin* alone taking the form of *plait* = PLIT. This literary irregularity does not appear in Latin, where precession is equally present, as in jăcĭo I throw; ējĕcto and ējĭcĭo I cast out:—căpĭo I take; ăccēpto I accept; ăccĭpĭo I receive, whence *keep*, =CIP.

255. *The name of the English* people, language and country, affords a good example of this change. The country was ānglĭă, the adjective and personal noun of which was ANGLICUS, whence the Anglosaxon language will be called Anglish. The A of this became ɛ in *met* in the Germanic dialects and old *E*nglish, and the vowel of *it* in proper *I*nglish, Ital. Inglese, &c. And as *I*nglish is almost as old as *E*nglish, we find these words spelt with I in some of the earliest records of the language. Thus Craik (Sketches of Literature, 1844; 1, 208) quotes the date 1113 for

"Ingland is thyne and myne."

Yet to this day,† this venerable *I*nglish language is ignored out of deference to *E*nglish, (from which many of its forms *are not derived*,) and to the dialects of Scotland, Ireland, Yorkshire and Holland.

256. *In passing from Latin to Italian* and Spanish, E is usually retained, although it may become I, as in—

* Walker's pronunciation—but now pronounced in the Irish mode. The etymologic spelling (so important with litterateurs,) being *rais-*, both in *raisin* and *reason*, the Irish mode was as proper for the latter as the former—for English speech and writing do not follow the same laws.

† February 5th, 1858.

ălĕvārĕ	Spanish	allIviar	*to alleviate*
crĕātūră	"	crIatura	*creature*
dĕus	"	dIos	*deity*
ēcclēsĭă	"	Iglesia, Fr. églIse	*church*
æqvālĭs	"	Igual, Old Fr. Igale	*equal*
rēspōndĕrĕ	Ital.	rI˘spónděrě	*to respond*
sēcūrus	"	sIcuro	*secure.*

257. *A vowel may be preserved for ages* unchanged. The following are examples of vowel identity between Latin and English.

ŏbēdĭo	*obey*	rēgno	*I reign*	vēnă	*vein*
rĕdĭmo	*redeem*	prĕcor	*I pray*	vēlo	*I veil*
sĭtus	*seat*	mărīnus	*marine*	vērbēnă	*vervain*
crōc-ĭo	*croak*	ārmă	*arms*	pūppĭs	*poop.*

Here the etymologic E is represented by *ey, ei, ay, ai;* etymologic I by *ee, ea, i-e,* (§ 254,) and etymologic O, U, by *oa, oo.* Thus, an orthography which represents *different* forms as similar, must represent *identic* forms as different, and must still be considered etymologic.

258. *The following words exhibit an identity* of vowels between old Frisian and English.

fri	*free*	hi	*he*	swet	*sweat*
hir	*here*	mi	*me*	wepn	*weapon*
iven	*even*	thi	*thee*	hwer	*where*
del	*dale*	breker	*breaker*	tema	*tame*
hel	*hale*	stil	*steel*	niar	*near*
spiri	*spear*	tron	*throne*	saterdi	*saturday.*

Here a genuine I is represented by *e, ee, e-e, ea.* Here *me* is torn from its affinities Latin MIhi, Italian MI, German MIr, to associate it with Anglish *me,* or perhaps French *me,* which is neither ME nor MI.

259. *The vowel relations* of allied languages are often irregular, as in the following Flemish and English examples, which have the same vowel (*o* in floor, door,) in the Flemish, but different ones in English.

voor	*fore*	sermoon	*sermon*	voor	*for*	doof	*deaf*
loos	*loose*	soon	*sun*	oor	*ear*	droom	*dream*
boom	*boom*	zoon	*son*	rood	*red*	stroo	*straw.*

260. A˙J *and* A˙V *have arisen* in the English *hide* (a skin) and German *haut,* from the old high Ger. HUT, which took the German form at one step, whilst the English form

had to pass through the Anglish *hyd, hid.* *Hide* is newer than *haut,* but not derived from it, as represented in dictionaries; nor is *bound* derived from *bind.*

261. A V *becomes* awe *in English,* by metallaxis (§ 237) varied by recession from the O point. *Chaw* has therefore not arisen from *chew,* but from a form like the German *kauen.* The Saxon (Lower Saxon) *kluven* precedes the Anglish *clavian* (*clawian*) and this the English *to claw.*

262. A V *cannot occur before labials* in English, as it can in German. Hence, old high German bōm (tree, pole,) became *baum* in German by anallaxis, and *boom, beam,* in English. German forms like the following are unknown in English, nor are they the antecedents of the English equivalents, although often quoted as such.

haufe *heap*	saum *seam*	laub (*leaf*)	haupt *head*
laufen *leap*	saufen *sup*	auf *up*	raum *room.*

263. A V *cannot occur before gutturals* in English; hence, there never were such English words as *bough, plough,* with a guttural following a diphthong, for the moment the diphthong appeared, the guttural disappeared. If the guttural was transmuted into *f,* as in *rough,* there could still be no diphthong before a labial. Richardson quotes Robert of Gloucester's *plowstaf* as his earliest citation for '*plough;*' and for *bough,* a line of Piers Ploughman (1362.)

Theer som *bowes* bereth leves, and some bereth none.

In the same work *doute* is used; Robert of Brunne (1330) has *douted;* and Robert of Gloucester used *doutless* about the year 1297.* From these and the French *doute,* the modern *doubt* is strictly derived, diphthongs being newer than vowels, and as the diphthong *could not be formed* without first rejecting the *b,* the subsequent representation of this rejected consonant was a mere literary blunder.

COMMUTATION.

264. *Commutation is a grammatic* interchange of elements, as in the Celtic languages. Thus, in the Gaelic, in writing mōr (great) and bēn (mountain) to indicate a *great mountain,* the *b* becomes English *v,* giving (in English spelling) *more-vane* instead of *more-bane.* In Irish, *mo* (my) and *mac* (son,) the *a* as in *what,* become, when used together, mŏ ṁac, the dotted *m* being English *v.* Welsh eu Brawd (their brother,) dy Frawd (thy brother,) fy Mrawd (my brother.) Here, as in Chinese, the affinity between nasal and pure (*m, b,*) is acknowledged and used in language.

* Shakespeare alludes to a dialect or pedantism in which *doobt* for *doute* was used, and from which the *b* was disappearing. See Love's Labor Lost, Act 5, Sc. 1, 1631—"He draweth out the thred of his verboſitie, finer than the ſtaple of his argument. I abhor ſuch phanaticall phantaſims. . . ſuch rackers of ortagraphie, as to ſpeake dout fine, when he ſhould ſay doubt; det, when he ſhould pronounce debt; d e b t, not det; he clepeth a calf, caufe; halfe, haufe: neighbour *vocatur* nebour; neigh abreviated ne:"

265. *Maraud;* Welsh mōr (the sea,) morawd (a seafaring,) ei Forawd (his seafaring,) which suggests *Foray*, and the Irish foraim a journey; Old French *forer* to *forage*.

PERMUTATION.

266. *Permutation is the interchange* of consonants of the same contact, and the well-known *Grimm's Law*, is a permutation analagous to the law of the vowels already stated.

267. B, P, F, M, &c. Latin FĭBĕr, Polish *bob*r, Eng. *be*aver, Sw. *bef*wer—skewer, skiver, —lie*u*, le*f*tenant, lief,—glădĭUs, glave,—āBsentia, Sp. a*u*sencia,—Angl. oredh, Eng. breath, —Hungarian kra*b*sálni, kra*p*sálni, kra*m*sálni, to s-cribble,—Greek *Μετὰ* and *Πεδὰ*, German *m*it, Eng. *w*ith,—Latin cŭMŭlŭs, Dan. ho*b*, Ger. hau*f*e, Eng. hea*p*,—Polish *b*ar*w*a, German *f*ar*b*e, color.

268. D, T, Th, L, N. Swedish, lite*n* and lite*t*, Eng. litt*l*e,—Dan. te*l*t, Eng. te*n*t, Lat. ăNĭmă, Sp. a*l*ma,—Rhaetian fau*l*sch, and fo*d*sch, a falchion,—Lat. ŏDŏr, Sp. o*l*or,—Lat. pērDīx, Ital. per*n*ic*e*, a par*t*ridge,—Hungarian le*gy* (with a *d*) and le*n*y, being,—Ger. *d*ing, Sw. *t*ing, Eng. *th*ing,—Eng. *th*orn, Ger. *d*ōrn, Sw. Dan. *t*orn. The American tribes of Me*n*ómonies and Assini*b*oi*n*s, were formerly known as Ma*l*ominis and Assini*p*oi*l*s.

269. R, S, &c. Requi*r*e, requisition,—hu*r*rah, huzza,—rai*s*e, rea*r*,—jee*r*, je*s*t,—thi*s*, the*s*e, —Ger. frie*r*en, to freeze,—Latin Rōbŭr, a kind of oak, Sūbĕr, the cork oak. In French and English, *s* between two vowels usually becomes sonant, as in mi*s*ery, depo*s*it, bu*s*y, the sonancy of the vowels being communicated to it.

270. *As Latin was without the sound* of sonant *s*, the tendency to form it between two vowels had to take another course. In poetic Latin the word for tree was ARBOS, which in the regular genitive case would make *arbosis*, but ārbŏrĭs was preferred, and the constant presence of *r* in the oblique cases *induced* (§ 214) its presence in the nominative ārbŏr. Latin Æs (brass, pronounced *ice*) ÆRIS, Gothic *ais*, *aizis*, with French *ai* and *z*. Latin spē*s* (hope, pronounced *space*, but long,) spērārĕ (to hope.) Nearly parallel with these, are the permutations of the true palatals.

271. G, C, J, Ng. As G and J have the same co-relation as B and V, they are equally permutable, as in re*g*al, ro*y*al,—*g*arden, *y*ard,—Sp. pa*g*ar, Fr. pa*y*er, to pay,—Gr. *χαίνω*, Ang. *g*eonan, Eng. *y*awn,—Old Frisian *i*est and *g*ast a *g*host. In vulgar English *y* is educed from *cay*, *gay*, as in kind, cow, card, pronounced CJÆND, CJAʻV, CJARD.

272. *The Greek χ loses its aspiration* in English, as in *χάος* chaos,—*λείχω*, Gothic lai*g*o, to lick,—*χολή* *g*all,—*χρῖσμα* (chrism, and) *g*rease. Spanish *j* (*g*) and Latin J, C, G, are permutable in Sp. eno*j*ar (to weary,) Fr. ennu*y*er; Sp. o*j*ear, to eye, o*g*le, from ŏCulus; lĕGībĭlĭs, Sp. le*g*ible. The Latin 'J' has acquired this power in Spanish, nearly corresponding to the conversion of 'V' to an 'F' power, as in German, where *v* is *f*.

CHAPTER XII.

TRANSMUTATION.

IN NOVA FERT ANIMUS MUTATAS DICERE FORMAS CORPORA.—*Ovid.*

§ 273. *Transmutation is the interchange* of consonants of different contacts. It is due to Otosis, Assimilation, Dissimilation, Glottosis, Metallaxis, and Anallaxis. Its importance entitles it to a distinct chapter.

274. *The peculiarity of Latin,* Welsh, and English, which place together a guttural and a labial (§ 222—4) of which one alone can be used and permuted in some other languages, may give rise to many apparent transmutations, as in the Welsh pedwar (four) and Irish căthăr (already cited,) which seem to present a transmutation between P and Cay.

275. *Welsh has few words commencing* with English *w*, but so many with *gay* preceding it, that this guttural is prefixed by induction to introduced words which were without it. This language has *winc*, *pinc*, and *gwinc* (a finch,) and the following examples show how new words might arise like the French G(u)illaume and English William with a seeming labial and guttural transmutation.

gward, *a guard*, *ward*	gwin, *wine*
gwyrd, *verd-ant*	gwinegar, *vinegar*
gwyn (white,) *wan*	gwing, *a wince*, *a wink*
gwae, *woe*, Sp. guay, Lat. VAE!	gwag, *a vac-uum*
gwallo, Lat. vāllo, *to wall*	gwr, gwyr, Lat. vĭr, *a man*
gwlan, Lat. vēllus, *wool*	gwarant, *guarantee*, *warrant.*

276. *As the labial vowel* U and guttural I are interchangeable, and have an intermediate in Greek Y, this has had a tendency to induce an occasional interchange between labials and gutturals.* This *partially* accounts for the forms *Βάλανος* (acorn) Latin Glāns:—*λύκος* (wolf) Latin luPus. In *λύκος* the guttural is preceded by a partially guttural vowel, and in the Latin form, P is preceded by the labial U.

277. *In the Belgian bevrijd* and gevrijd (be-freed) there is no transmutation, because be- and ge- are distinct prefixes, probably present in *Βλέφαρον* and *Γλέφαρον* (eyelid) from *βλέπειν* (to look,) which may be connected with *λάμπειν* (to shine) and g-leam. Compare the German Flimmern, and English Glimmer. The stem of *Β-ράχ-ω* and *Κ-ρέκ-α* (to ring, c-rack) is seen in *σύ-ριγ-μα* (a c-reaking.) *Πότερος* (which of the two,) Aeolic *Κότερος*, seem to have a different prefix, to a stem seen in the Latin utĕr, with the same meaning.

* Olivier, Des Sons de la Parole. Paris, 1844.

278. *The Greek σκύλον* is considered the original of the Latin spŏlĭūm (booty;) but *σκύλον* may be a cognate of cŭtĭs (a skin,) *καλύπτω* (to hide,) cēlo (to con-ceal;) and S-POL-IU^{m} may be a cognate of pēllĭs (a skin.)

OTOSIS.

279. *Otòsis is a change in words* due to a misconception of the true sound, influencing consonants of the same quality; nasals, aspirates, sonants, and surds, generally retaining these phases in their new position. The word is formed from *ὦτος*, the genitive case of *οὖς* (the ear.)

280. *The French nasal vowels recall* the sounds which most nearly resemble them in English, as *m*, *n*, *ng*. This has turned -o^{n} into -oon, as in pontoon, bassoon, dragoon. —M++N. Eng. bos*om*, Ger. bus*en*, Latin Mēspĭlu^{m} (a medlar,) Ital. *n*ĕspŏlă.

281. H++S. Gr. *ἰλιχή*, Latin Sălĭx, willow,—*ὑπέρ*, Supĕr, over. In Hebrew, H occurs final, but becomes S in Greek and Latin, partly by induction and partly by otòsis. Hence, the double forms Jona*h* and Jona*s*; Jeremia*h* and Jeremia*s* (with English *y* as initial,) perhaps inductively aided by Greek names in -as. There is a final Sanscrit aspirate which has a particular character, neither *h* nor *s*. *This was probably h* pronounced with the mouth partially closed, causing the breath to strike the palate and teeth, thus giving an effect resembling *s*. As heard by us in modern Bengalee, it sounded like a short abrupt *h*. We have proposed the figure 5 for it, as this is sufficiently like *s*, whilst it resembles one of the forms of German capital *h*.—H++F. Archaic Latin Fircus, Lat. Hīrcus (a goat.)

282. Sh++S, H. A person unacquainted with the English sibilant *sh*, would be likely to refer it to *s* or *h*, or to some other surd aspirate he might be familiar with. Hence, the English word *sheep* has become HIPA in Hauaian, and SIP in Penobscot. For a similar reason the peculiar 'cerebral' *s* of the Sanscrit word for *six* became *h* in the Greek *ἕξ*, and *s* in the Latin SEX; whilst the Sanscrit word (said to contain English *sh*, and *w*) sh w a sh u r a became (if indeed this is the oldest form,) Greek *ἑκυρός* (brother-in-law) and Latin sŏcĕr. Having the original element *sh*, the Germans preserved it in their form schwager, and the Hungarians (*s* as *sh*) in sogor. The Latin took *s* by induction in both cases, because as an initial, *s* occurs about twenty times as often as *h*. The *cay* of the Latin SOCER is probably older than the palatal of the oriental form, which may have been sh w a c u r a originally.

283. Ch++F. *When the old English ch* (*χ*) began to fall into disuse, its sound was either dropped, as in tho*ugh*, thro*ugh*, plow, not, or confounded with *f*, as in tough, cough, rough, enough. So *χολή*, which by permutation gave Gall and Colic to English, gave Fĕl (gall) to Latin. Contrariwise, the English craft, soft, after, are the Belgian kracht, zacht, achter.

284. Th++Ch, Ph, S. Gr. *ὄρνιΣ*, gen. *ορνιθος* (a bird,) Doric *ὄρνιξ*, gen. *ορνιΧος*,—*Φλάω* and *θλάω*, to bruise,—Doric *αΣάνα* for *αθάνα*, Minerva,—*Σιὸς* for *θεὸς* a god, Eng. Theodore, Russ. Fedor. D++G, B. Doric *Δᾶ* for *Γᾶ*, the earth; but *δνόφος* (darkness) for *γνόφος* is by assimilation. Aeolic *Βελφὶν* for *Δελφὶν* a dolphin,—*σάΜΒαλον* for *σάΝΔαλον* a sandal,—Ital. coDardo (a coward,) Sp. coBardo, partly influenced by *o*.

285. G++B,—C++P. *Γλήχων* Attic *Βλήχων* pennyroyal,—*Πύανος* and *Κύανος* a bean.

286. T++P, C. Aeolic *σΠάδιον* for *σΤάδιον* a race course,—Latin VĕTulus (old,) Italian véCchio. Although T is more easily formed than Cay, if the number of the latter greatly predominates over the former, the rare occurrence of Cay derived from T may be the result. In a paragraph of Hauaian containing 160 consonants, 28 per cent. were *cay*, whilst a Latin paragraph furnished about 9 per cent. The former example contained no T, so that any word coming in with this sound would be likely to fall into *cay* by induction.

ASSIMILATION.

287. *Assimilation is the change of a consonant* to adapt it to another with which it is brought in contact. The *n* of *in* becomes *m* before *p*, *b*, *m*, by assimilation, as in im-plore, im-bue, im-mense, but remains unaltered before *f*, *v*, *w*, as in in-fect, in-vert, in-wall. *a. Latin* n *always became* ng *before gay, cay, ch, q*, as in īn^{s}cērtus, īn^{s}gĕnuus, ān^{s}chīsēs, īn^{s}qvīro, (§ 101) these words being cited for it by the ancients.

288. *Latin had a peculiarity* still preserved in Italian, of doubling a consonant as *tt* in āttēndo, and *nn* in ānnūncĭo. One of these consonants is in most cases absorbed in English, as in *attend, announce*, in writing which, the second character is a mark of shortness for the preceding vowel. There is but one *f* in affinity, Fr. affinité, Sp. afindad, but the Spanish alone shows its etymologic relation to the Latin āffīnĭtās (gen. affinitat-is) and Italian affinità, because there is no dissimulation about it, no misrepresentation, it pretends to nothing but what it is entitled to, and claims no addition but that of vocality for the *t*.

289. *If 'accept' were a Latin word*, it would be written *axept;* but its prefix *ad*, (which became *ac* before *cay* in āc^{k}cēpto,) became *s* before an *s* sound, as in ās-sŏcĭārĕ (to associate,) so that *assept* would have been the Latin form of the English word, and in fact, the true English form, because *ad-* stands in inscriptions unassimilated, as in ADCENSUS, ADFECTUS, and as the assimilation was a departure from the true form which could not be transplanted into English, the attempt should not have been made.

DISSIMILATION.

290. *Dissimilation is the reverse* of assimilation. It prevents unusual combinations, and is due to induction. MF are incompatible sequents in Italian and Spanish, where they

break the law of assimilation and transmute (§ 273) *m* to *n*, turning NYMPHA, SYMPHONIA, into *ninfa, sinfonia.*

291. *In Italian* (as in Latin) *mm* are compatibles, as in *commissione, commissario;* whilst in Spanish, one *m* is dropped from *comisi-on, comisario,* as in the English equivalents *commission, commissary.* When one *m* is not absorbed in Spanish, the *n* is unassimilated, as in *conmoci-on conmiseracion, conmemorar.* Dissimilation occurred in Latin, for although *mf* occurs in the original of *circumflex,* we find *an-* for *am-* (ambi) in ANFRACTUS (a turn;) and the inscriptive forms CIRCVNFLEXVS, CIRCVNVENIO, CIRCVNDATA.

292. *The Greeks spontaneously rejected* two aspirates in certain cases; hence *θ* in *θριξ* (hair) became *T* in the genitive case *Τριχὸς* in consequence of the presence of *χ*. So *Τρέχω* (I run) is *θρέξω* in the future tense; and *Τρέφω* (I nurse) is *θρέψω*. The -ish in the words Engl-ish, Span-ish, seems proper in Belg-ish, with *gay;* but if corrupt *dzh* is used, this *Belgish* will give way to *Belgian* or *Belgic;* whilst *Russish* is rejected for *Russian.*

293. *The English ordinal suffix* -th in four-th, nin-th, is -d in thir-d, and -t in fif-t, six-t, in the speech of those in whom the language instinct has not been effaced. In old English we find first, second, third, fourth, fift, sixt, seventh, eight, ninthe, tenth,—*eight* being due to the aspirate once present in this word, which with its loss, could take *th* in *eighth.*

GLOTTOSIS.

294. *Glottòsis* is an organic change* to facilitate ease in utterance, and it depends greatly upon the number, order, and frequency of occurrence, of the consonants concerned in it; practice making that easy in one language, which is difficult for those who speak another.

295. *As the base of the tongue* has less room and is less flexible than the end, it is more difficult to adapt it to the production of its peculiar consonants, so that children replace them with dentals and palatals, saying *do* for *go,* and *til* for *kill.*

296. *The cavity of the mouth being set* for the following vowel whilst the consonant is about to be formed (§ 203,) the closer aperture required by the vowels of *key, get, gay,* afford so little room for the action required to produce their consonants, that there is a tendency to use the outer portion of the tongue, which is thinner and more flexible, and has more room in the outer mouth. This action, which is often united with cyclesis (§ 207,) converts gutturals to dentals and palatals, particularly before I and E. In some cases, where orthography is not properly understood, this has perverted characters made for guttural sounds, to enervated powers (usually called *soft,*) in various modern languages.

* Glottòsis, as a word, is formed from *γλῶττα,* the tongue, by analogy with certain names of diseases, (amauròsis, pyròsis, phlegòsis,)—this being frequently as great a defect in speech as stuttering, which is classed with diseases. As the word *language* is applied to speech in general, because the tongue (lĭngvă) is its chief implement, so *glottosis* is proposed for *organic* transmutation between all the contacts.

297. *Compare* Greek Greece; arc arch; bark barge; Latin LEGIBILIS, Fr. lisible, Eng. legible. The English *tsh* is commonly replaced by *ts* in German and *sh* in French, as in Lat. Cămĕră, Eng. *ch*amber, Ger. *z*immer, Fr. *ch*ambre.*

298. *This change is widely spread,* for although the speech of different countries may vary greatly, its expression is due to the same organs. Volney remarked it as a dialectic peculiarity of Arabic; and Morrison informs those who wish to use his Chinese Dictionary, that words like (*ch* in *chip,*) chăng vary to tsang; and that *k* in the Peking dialect, "before *e* and *i* is pronounced as *ch* and *ts;* thus *king* is turned into *ching*, and *keang* becomes *tsëang.*" Morrison does not state whether *k* becomes *tsh* before *i*, and *ts* before *e*, with any degree of uniformity, as in Russian, where, in certain inflexions, *k* becomes *ts* before *i*, and *tsh* before *e.*†

299. L ++ R. These two consonants are made so near the same point that they are readily transmutable, and to such an extent in Hauaian, that they are used indifferently. R is wanting in some languages, and L in others.

L++R.			S++T, D.		
Sp. milagro		*miracle*	Ger. hăss		*hate*
" papel		*paper*	" aus		*out*
" peligro		*peril*	" weiss		*white*
" sabel		*sabre*	Dan. ædike	Ger.	essig, (vinegar)
" esclavo	Port.	*escravo*	Ger. hat,	Dan.	har, *has*
" eneldo	"	*endro* (dill.)	Gr. ῥόδον	Lat.	rŏsă *rose.*

300. Interchange of th, sh, zh, r, l, n, d, t, s, between ancient and modern geographical names.

ALAMATHA	Elamora	BERGUSIA	Balaguer
PONTES	Ponches Fr.	LACARIA	Lancona
ARAVSIO	Orange	ORONTES	Eluend
CHARADRUS	Calandro	METELIS	Missil
CALIFFAE	Carifé	PALURA	Balasor.

301. *In consequence of the projecting jaws* and teeth (prognathism, *g* pronounced,) of the

* Mr. Ellis writes several notes, the purport of which is, that "*tsh* descends from *k* viâ *kj* historically, and *dzh* from *g* viâ *gj*, as also *tsh dzh* descend from *tj, dj*, as in *nature, verdure.* . . . I think we can as well believe *kj* to have become *tsh* in Sanscrit as in Italian. . . . Wallis (1653) analyses *sh, zh, tsh, dzh,* into *s-j, z-j, t-j, d-j,* and Smith (1568) shows that the former are nearly related to the latter in sound. . . . Salesbury (1547) gives *si* as the nearest Welsh for *sh*, resembling it, says he, as copper does gold."

† Grimm's Geschichte der Deutschen Sprache, §382.

African race, it is not easy to place the tongue in the proper position for making *th*, even when English is their vernacular, so that it is often replaced with *f*, as in *south*, *nothing*, &c. This renders *th* doubtful as an African element. Shakespeare's 'Moor' being a negro, his name, to have a rational form, must be *Otello*, as the Italians make it.

302. *There are four or five times as many* Italian words in pia-, fia-, chia- (*ch* as *k*,) as in pla-, fla-, cla-, showing a preference for the former. This partiality caused the elision of *l* and the insertion by induction of I or J, rather than the transmutation of *l*. This from Latin produced the Italian forms—

FLAMMA	fiámma	*flame*	PLUMA	piuma	*plume*
CLARUS	chiàro	*clear*	PLANUS	piāno	*plain*
PLANTA	piánta	*plant*	PLUVIA	pioggia	*rain.*

303. *In the last example* the corrupt *g* (in *gem*) is made from English *y* in PLUVJA, the V being lost, and the second 'i' inserted to aid in spelling the corrupt *g*. The loss of V and the change of I to J (as in passing from fil-i-al to fil-ial) is the only difference between the ancient geographical name SALVIA, and the Italian form *Saglia*=SA-LJA. This irregular Italian orthography disguises the close relation between the ancient and modern geographic names—

PAL-A-NI-A	Ba-lā-gna	SE-NI-A	Sē-gna
OL-LI-US	ŏ-glio	TER-BU-NI-O ×	Trĕ-bi-gna
PAL-LI-A	Pă-glia	CO-LO-NI-A	Co-logne, Fr.
AL-BI-NI-A	ăl-bē-gna	HIS-PA-NI-A	Es-pagne "
HOS-TI-LI-A	ŏs-tī-glia	BRI-TAN-NI-A	Bretagne "

304. *That elision of* L *and epenthesis* of I or J are concerned in FLAMMA, fiămmă, is proved by the Spanish forms, where both L and J (written *ll*) are heard, as in llama (flame)=LJAMA, or in the English *collier* for *coaler*.

Latin,		*Italian,*	*Spanish.*
PLANUS	*plain*	piano	llano
PLENUS	*full*	piēno	lleno (& cheno)
CLAVUS	*key*	chiave	llave
┤PLANTAGINIS	*plantain*	piantaggine	llanten.

305. *By taking Portuguese* into account, we find a newer form in which PL-, &c., are lost, and the J converted into French *ch* (Eng. *sh*, or dialectically into *tsh*,) by glottosis—

Latin,	*Italian,*	*Spanish,*	*Portuguese.*
CLAMARE *to cry*	chiămāre	llamar	chamar
PLUMBU^{m} *lead*	piŏmbo	plomo	chumbo
PLORARE *to lament*	. . . . .	llorar	chorar
PLAGA *a blow*	piāga	llaga	chaga
PLUVIA *rain*	piŏvĕre	llover	chover.

306. *A union of three vowels,* as *aie,* or *eia,* is contrary to the genius of English and its antecedents, and when, by the elision of a consonant, three vowels are thus brought together, and the intermediate one is I or E, it first becomes J, and then perhaps a palatal, as English or French *j*. It is not, as we are commonly taught, the B of the Latin răbĭĕs that becomes *zh* in the French *rage,* and *dzh* in the English *rage,* but the I. *This is confirmed* by the Rhaetian form *rabgia,* in which *i* indicates corrupt *dzh*. The supposable intermediate steps between Latin and French (the first and fourth column) are given here in Latin Letters, but *abbreviare* is not a classic word.

ābbrĕvĭarĕ	ABRE..IAR	ABREJAR	a..brége^{r}	> *abridge*
DILUVIU^{m}	DILU..IU	D'LUJE	< déluge	*deluge*
RABIES	RA..IES	RAJE	rage	> *rage*
SALVIA	SA.. ..IA	SAJE	>sauge	> *sage*
CAVEA	CA..EA	CAJE	cage	< *cage*
SEPIA	SE..IA	SEJE	sèche	*cuttle-fish*
RUBEUS	RU..EUS	RUJE	rouge	*ruddy*
Sp. gubia	GU..IA	GUJE	gouge	> *gouge.*

If the elided B of răbĭĕs had been D, *rage* &c. would have been examples of partial metallaxis (§ 312, 313,) the D tending to draw the J into the palatal contact.

307. As *sa..ia* made French *sauge* (the plant *sage*) with a *sonant* 'g' due to the sonant *lv* of the original; and se..ia made *sèche* with surd 'ch' due to surd *p* of the original, we may account for sonant *zh* in fusion, and the surd *sh* in mission.

308. *Although mission, nation,* with *sh,* are derived from the French miss-i-o^{n}, na-ti-o^{n}, (NASIO^{n}) with *s;* and *fusion,* with *zh,* from fusio^{n} with *z,* there is no transmutation of *s, t, z,* to the English palatals, the French consonants being lost, whilst *their influence remained.*

309. *Those go upon a false assumption* who think they are justified in using *c* as an alphabetic character for *sh* from the analogy of *ocean.* It is the *e* which is the real *sh* here; and the *t* in *notion* has as little to do with the same sound, as the *p* of *sepia* in sèche, or in the Old French *pipion,* which, as an English word, is pronounced *pigeon,** as the Italian *storion-e* is pronounced *sturgeon* in English.

* See Paradoxes 1 and 6, § 41 *a*.

310. *The word 'oceanic'* (with *s*) *is older* than 'ocean' (in two syllables,) and is not derived from it; and when both are pronounced with *sh*, this sound is represented by 'e' in 'ocean' and by 'ce' in 'oceanic,' where 'e' does double duty as a consonant and a vowel. The word is more correct when pronounced o-se-an-ic; so is pro-nun-si-a-tion, because making *sh* out of *si*, elides the *vowel* power of '*i*' and reduces the word one syllable.

311. *If, by the conversion of i* into English *y* or *zh*, o-be-di-ent becomes o-be-dyent (the writer's mode of speaking,) or o-be-dzhent, no speaker of real English can preserve *both dzh* and *i;* yet Walker has coined a jargon with such forms as o-be-je-ent, and cris-tshe-án-e-te. Similarly, if 'omniscient' has an *s*, it has four syllables, if *sh*, it has but three. Compare the dissyllables Russia, Asia, conscience, and the trissyllables militia, malicious.

METALLAXIS (§ 273) OF CONSONANTS.

312. *Sh being made posterior* to the *s* position, and anterior to that of *cay*, it may happen, that in the attempt to pronounce the combinations *s-ch* (σ-χ,) *sk, sy, ty*, the tongue, instead of taking both elements in rapid succession, may fall between them upon *sh*. In this manner English *sh* has arisen from Anglish *sc* (Swed. Dan. *sk*) and Belgian *s-ch*, as in ship, shaft, shape, shovel, shed, fish, &c. Latin Mūscă, (a fly) Fr. mouche; maStĭCārĕ (to chew) Fr. macher.

313. *English u being yoo, su* (when not the *soo* of uncorrupt speakers,) either drops the *y*, or falls into *shoo*, &c., as in sugar, sure, treasure, pleasure, where it is not the *s* so much as the *y* of *u* (yoo) that has the power of *sh*. It is the *s* which may be said to draw up the guttural through *sy* to the *sh* position. When *sh, zh, tsh, dzh*, occur before a vowel written with 'u,' this may not be read *yoo*, as in sure, azure, chuse, jury. The forms 'ishyoo' for *issue* (íshoo, in legitimate, as compared with pedantic English,) and 'mezhyoor' for *measure* (mézhr,) seem to have been manufactured from the old spellings, under the impression that *ss* in *issue* represent *sh*. In 'ishyoo,'* 'u' is a triplet, composed partly of *sh*, and entirely of *y-oo*. If the 'u' of *unit* occurs in *sue, suit*, these words must become *shoe, shoot;* but if the *s* is preserved pure, the vowel must be that in *boot*. There is no other alternative. Whatever mistakes foreigners may fall into, or elocutionists manufacture, this is the law—the genius—the philosophy of English speech.

ANALLAXIS OF CONSONANTS.

314. *As the Greeks could not pronounce* the oriental *sh*, they either transmuted it into *s*, or (by anallaxis) used their *ξ ks* for it, as in *Artaxerxes*, in (modern) Persian *ardeshir-shah* (great king, or lion.) French 'charnière' (a hinge,) Belgian scharnier, with σ-χ from *sh*.

* This is often said in England, according to Mr. Ellis' MS., "to avoid the pedantic effect of *is-yoo* on the one hand, and *ish-oo* on the other, which is thought flat, broad, vulgar, inelegant, and comparable to *noo* (Franklin's pronunciation) for *nyoo*. . . . I grant you that either *ish-oo* or *is-oo* would be in accordance with the genius of our pronunciation; but fashion dislikes *soo, soot*, for *sue, suit*, and laughs at *shoo, shoot*, as Irishisms."

CHAPTER XIII.

ETYMOLOGIC BEARINGS.

We must not permit ourselves to be guided solely by the eye nor by the grammarian either; but must, on the contrary, consult the ear.—*Bonnycastle*, Classical Museum, No. 23, p. 32.

§ 315. *Mr. Ellis has calculated* (Plea, 2d ed., § 36,) that not more than one person in 1600 can be benefited by an etymologic orthography, and it has been asserted that all the countries of which English is the language, do not furnish five hundred etymologists. There are, in fact, more good mathematicians and good chemists than good etymologists, and whilst few chemists would be at a loss to give the rationale of their processes, the authors (Sullivan, Graham, Lynd,) of popular school etymologies, cannot explain *their own examples*, nor distinguish between *mutation*, *elision*, and *insertion*.

316. *The chemist works primarily with things*, and secondarily, with symbols; the scholar does the reverse, studying symbols rather than living speech, as a deaf mute would be compelled to do. Hence Schele de Vere* calls the French word for water "*eau* (*o*)" a triphthong; he says most English radical words have been reduced to monosyllables "at least in pronunciation;" and that "the changes of sounds and their growth go on continually, and thus the *spelling* of a language gives us the only true account of its *first* form and *subsequent* historic changes. This is the *principal* and *all-powerful* argument against phonography." A perverse inference from a correct premise. "For nearly fourteen centuries of our Christian era but few persons in France and Germany could write, and how was it possible to judge of *words* and their etymology without *seeing* them?" Dr. Latham says—"To those writers who, denying the affinity between the Irish and Welsh, can identify the Erse with the Hebrew, I apply the term *nyctalopia*—the power of seeing best in the dark." Yet an Irish laborer who had acquired Welsh in Wales, when asked some questions about his own language, stated of his own accord that Welsh was "a good deal like it." And yet how different: but *his* language instinct had not been extirpated, and he could grasp the relations as readily as an American savage can disentangle an etymology in his vernacular.

317. *The Dictionary of Derivations;* or, an Introduction to Etymology, by Robert Sullivan, LL. D., T. C. D., meets with the approbation of "the distinguished Philologist and Anglo-Saxon scholar," Dr. Bosworth, and causes the Dublin University Magazine to "confess we have been startled at the extent of the ignorance of many previous writers on the subject." Dr. Sullivan, with many others, gives *divinity* (an older word) as from *divine*,

* Outlines of Comparative Philology. New York, 1853. See also § 6 *a*.

and he represents *b* and *v* as becoming "*g* soft" in passing from the Latin RABIES, ABBREVIARE, LUMBUS, to the French rage, abréger, longe,*—a transmutation which is almost impossible. So Graff thinks that V in CAVEA became *g* in *cage*.†

318. *Sullivan, Graham, and Lynd*, represent the dental consonant *l* as *frequently* passing into the labial vowel *u*, a phenomenon of which we do not recollect an example. They cite for it Latin SOLIDARE, French *soudre* (to soder,) and Latin ALTUS (high) compared with the French vowel *haut*. These are examples of the loss of *l*, as in *calf, folk*, (perhaps absorbed by *d* and *t*,) and of the vowel change of O to U, (as in *gold, goold*,) and from A to O, (written *au* in French.)‡ But such authors mistake characters for elements, spelling for etymology, and the flourishes of the writing master for the modifications of speech.

319. *According to Sullivan, h* is prefixed in passing from the Latin OLEUᵐ (oil) to the French *huile*, which has as little aspiration as the English word *oil*. G is said to be inserted in 'Bretagne' from BRITANNIA (although there is no addition whatever,) and in 'grange' from GRANUM, which could not have produced it, although GRANARJUM might. Nor is there any change from *v* to *g* in DILUVJUM *deluge*, or of *b* to *g* in RUBEUS *rouge*. In fact, it is difficult to see how SALVARE *sauver* should be considered a transmutation of *l* to *u*, and RUBEUS roUge *not* be regarded as the same law applied to *b* and *u*—although both views would be equally incorrect.

320. The magazine quoted, praises Dr. S. for the extent to which he has referred English words to Latin originals, and Dr. Bosworth, in the kindness of his heart, says,—"I wish you would turn your attention to the Anglo-Saxon, German, or Teutonic part of our language. You have well proved our obligations to the Latin and Greek." Among these, *haugh-ty* is referred to ăl-tus, although it is akin to *high*, Belgian *hoog* (hōgh) with a guttural which ALTUS cannot account for. *Hawk* is referred to Latin fălco, instead of Anglish *hafoc*, Welsh *hebog*, English *hobby*. Finally, he pronounces Richardson's "far the best, and, indeed, the only complete Etymological Dictionary of the English Language that has yet appeared."

321. *Fine* (a mulct) is referred to Fīnĭs, end, limit; but (with the law Latin FINIS) it seems to be a different word, the Gr. ποινή (a fine,) Latin Pōenă, pain, punishment; pūnĭo, I punish. Compare Pătĕr and Father.

* But compare *lendes* (loins) of Chaucer, German *lende*, Lat. CLUNIS,—REGIO VEL PARS LUMBEA, the lumbar (loin) region or part.

† Althochdeutscher Sprachschatz, vol. 1, p. 614.

‡ The obvious explanation of these examples may be found in Böhtlingk,—über die Sprache der Jakuten. St. Petersburgh, 1851; p. 4, note 9. He cites *galdere, aldace*, &c., of the Florentine dialect, for *gaudere* and *audace*, as a change from *u* to *l;* but it is rather the loss of *u* and the eduction (§ 208) of *l* from the cognate *d*.

322. *Bead* is akin to bud, button, Hindustanee *pot* a bead. "Supposed from *beten, biddan,* to pray, from the use of beads in Catholic countries." Webster, Richardson, Tooke. Yet, beads must have been invented, named, and used for ornament in all countries, antecedent to such a collateral purpose.

323. *Notiophilus.* Some years ago the authorities of the State of New York permitted a large sum of money to be paid for the publication of a worthless quarto volume, devoted to the Entomology of that region. The author was for thirty years a professor of natural history in a college in Massachusetts, and therefore competent, one should suppose, to work out the technical etymologies of the science which he professed—for these are all spelt according to rule. Nor was there any necessity to deal with etymology, as the book was about insects, without regard to the meaning of their names. This official work, published "By Authority," is alluded to here, to show *how little use can be made of an etymologic orthography,* even by the so-called "educated" classes about some of our colleges. Here *Notiophilus* is rendered "notion beetle," from the Latin nōtĭo a notion, instead of *wet-lover* from νότιος wet, φίλος lover. *Anchomenes* (from ἄγχω, to squeeze the throat, because the insect has a narrow neck,) is made "ditch beetle," as if from ἄγκος, a cleft. *Aphodius* (named from inhabiting filth,) is made "footless beetle," as if from α (not,) πούς (foot,) the insect being a good walker and flier. *Cucujus,* (from the South American name *cucujo,*) is made "mixed beetle," as if from κυκάω. *Coelioxys* (meaning pointed abdomen,) is made "ceiling wasp," &c. The 'Entomology' is equally worthless.

324. *Entomóstraca,* the name of certain minute Crustacea, some of which have a bivalve shell, is derived from ἔντομα, insects, ὄστρακον, a shell, but in Macmurtrie's Dictionary of the terms used in natural history, they are said to be thus called, because the shell is divided into numerous segments; and the Greek μάμμα (a mother) is given as the etymology of *mammalogy,* which science would be thus made to treat of animals with mothers.

325. *Arquebus.* The Latin ārmă first meant tools of husbandry, next those of war. In German 'armschütze' (from the roots of *arm* and *shoot*) is a crossbowman; and 'armbrust' is a crossbow, as if connected with *arm* and *breast,* from a mode of holding the weapon, the stock of which was tubular, with a transverse groove to allow the string to drive the arrow or ball.

French 'arquebuse;' Norman 'arbalest;' Ital. arcobugio and archibuso (as if from 'arco' a bow, and 'bugio' a perforation, 'buso' pierced;) English arquebus, arblast, awblast, harquebut, haquebut, hackbut, hagbut, hagbush, haque, hack, hake, and demihake. Compare German 'doppelhaken,' as if *double hook,* double the size of the hakenbüchse.

Belgian 'haakbus' (as if *hook tube,* as 'vuurroer' is a gun or *fire tube.*) The Belgian 'bus,' (German 'büchse,' a box, pipe, gun-barrel, and gun; Gr. πυξίς, Eng. box,) occurs in

fowling-*piece*, and blunder-*bus*, a blundering perversion of 'donderbus,' as if *thunder tube*—all of them being used heteronymically, i. e., by transfer of idea as in sparrow-grass for the older sparagus.

Originally applied to the cross-bow, these names were extended to portable fire-arms when these came into use, the general appearance being the same. In some cross-bows, as in the first muskets, the stock was straight, and held on the breast in shooting. Those with a crooked stock were associated with *hook* by the Germans, who invented this form.

"*Arquebuse* Fr. from *arquer* to make crooked, and the Teutonic *bus* a pipe, a gun, &c. Hence the word means a hook gun."—*Webster*.

"*Arquebuse*, Sp. arcubuz, composed of *arco*, an arc or bow; and *busio*, which signifies *hole* in Italian. (Menage.) But the etymology of busio is unsettled."—*Richardson*. For *Hackbut*, Richardson quotes Lodge thus—"from *haque*, a term of unknown derivation, and *buter*, Fr. to aim at."

The ancients had various engines for casting missiles, named BALISTAE, (from βάλλω, I throw,) some of which were on the principle of the cross-bow. We find also the ancient term ārcūbālīstă (or with *ll*,) which, with the aid of otosis, elision, and heteronymy, arising out of the varying use and changing shape of the weapon, will account for all the forms cited. Poitevin assigns the Fr. arbalète to the Greek intensive ἄρι, and βάλλω. Graff assigns 'armbrust' to ARCUBALISTA, but also suggests *arrow* for *arm-*.

The elision of *cu* and eduction of *m* from *b* of the original, made the heteronymic *arm* of 'armbrust' (a word which is in *Trench*,) and the mutation of *l* to *r* accompanied *balist*, *b'list* in suggesting *brust*, or its dialectic form in the Nordish 'armbrysti.' By these means the bow became an *arm*, and a 'thrower' a *breast;* whilst a pistol-shaped, gun-shaped, or crooked handle, required that an 'arc' in one language should be considered a *hook* in another.

A	R	C	U-	B	A	L	I	S	T	A
a	r	..	..	b	a	l	e	s	t	..
a	r	..	..	mb	..	r	u	s	t	..
a	r	..	..	mb	o	r	..	s	t	..
a	r	q	ue	b	..	..	u	..	t	..
a	r	q	ue	b	..	..	u	s	..	..
ha	..	c	..	b	..	..	u	..	t	..
ha	..	c^{k}	..	b	..	..	u	sh	..	..
				b	..	..	u	s	..	..
				p	..	..	ie	c	..	e

326. *Pistol*, Bohemian root BA, whence the infinitive ba-ti, to speak; pe^{v}ti, to sing; beseda, discourse (fatka, a parasite;) wyr, wejr, an owl; weyt, to howl; weysk, a shout;

wyr^{v}ek, pronunciation; báj, a ba-bbler, fi-bber; baje (Pol. bajka,) a fa-ble; pe^{v}se^{v}n, a song; basen^{v}, a poem; wáti, we^{v}ní, to blow; fujak (and wítr,) wind; wícher, a whirlwind; wích, a wisp, (Ger. wisch;) we^{v}trník, a sail; we^{v}jir, a fan; péro (Pol. pióro,) a feather, a fin; perut^{v}, a wing; pych, to breathe; fauneti, to wheeze; pasari, noise; písk, a whiff, a quill; písák, a writer; pisatel, an author; pis^{v}t^{v}ala, a pipe, (Lat. FISTULA;) pis^{v}tadlo, a *pistol.* Akin are Polish bez, elder-tree; piszczel, a pipe.

327. *Doggerel*, a deteriorative formed like *mongrel*,—from the Germanic *dichter*, &c., a poet, and meaning bad poetry.

328. *Laudanum*, an otosis of *nodnum*, and a cognate of *anodyne*. Gr. adj. *νώδυ^{v}νος*, neuter *ΝΩΔυΝΟΝ*, relieving pain, anodyne. Webster and Sullivan refer it to LAVDO (I praise,) first assuming the spelling to be etymologic.

329. *C-lay-more*, Gaelic and Irish mōr (great,) Gael. claidhamh, Ir. claidheamh, Welsh cledd-yf (a sword,) c-led-r (a f-lat body,) ll-ed (breadth,) Lat. lātŭs, Gr. *πλατὺς* (wide;) Ir. leith-ead (breadth,) leithe (the shoulder blade,) Eng. p-late, b-lade, p-lot, p-lat, f-lat, s-lat, s-late, c-loth, lath, leather, ladle, b-road, sp-read, (and *led* with silent *d* in) buckler. An etymologic orthography like *bwgellyedr* and *cllyedheamhmor*, exhibits their mutual relation perfectly, to those who object to the phonetic spellings 'buckler' and 'claymore.'

329*a*. *Strumpet*, Irish striobuid; Gr. *ῥέμβω* to st-roll, *roam*, ramble; *ῥεμβας*, she who strolls, a strumpet. For *Maraud* & *Foray*, see § 265.

330. *Heyday*, perhaps Old Fr. haite (health,) haitie (healthy, joyous, gay,) Ger. heiter (serene, happy.)

331. *Grampus*, *γρομφάς*, S-CROFA, a SOW; SCRIBO, I scratch, write, (*γράφω*, *γλύφω*;) SCRUPUS, a sharp stone; CLUPEA, a herring, *from the sharp ventral scales.* The motions of the small cetaceans are suggestive of the wallowing of swine, and the shape of the snout and back are somewhat porcine; hence *δέλφαξ* a pig, *δελφὶς* a dolphin; porpus, from pork-fish, &c.

332. *Davit*, a cognate of *gaff*, from Sp. gavieta, by otosis.

333. *Well*, Latin bĕnĕ,—compare William and Bill; Dan. teLt; Eng. teNt. *Bad*, Lat. mălŭs. Similarly, bŏnus, mĕlĭŏr, and bēllus, are cognates.

334. *Transom*, in shipbuilding, a timber bearing some resemblance to a bench; TRANSTRUM, a bench for rowers, a cross beam; *θράω* I sit, (substantive dimin. *θρᾱνιστρον*, of) *θρᾶνος*, a bench for rowers (the uppermost of three,) a projecting head of a beam.

335. *Fern*, *πτέριν*, *πτερὶς*, akin to *πτερὸν*, a plume, a wing, from *πετάω*, *πτάω*, to spread.

336. *Proper names* afford much etymological material. *Osrīc*, rich in oxen. *Hooke*, probably Hugo, exalted, high. *Hogg*, Hague, Hedge, Hedger. *Lightner*, Ger. leiten, to lead. *Forest*, probably Ger. Fürst, a prince, nobleman. *Forester*, probably Ger. Vorsteher,

a warden, a *Foreman*, which (as a proper name) may be Fuhrman, a wagoner. *Hartman*, a forester.

337. *North*, coarse, unfriendly. *Grote*, Belg. groot, great. *Hartley*, little heart. *Landseer*, probably Fr. lancier, a lancer. *Klenewater*, (not *clean*, but) little water, i. e., Brook. *Peck*, Beck, Ger. Bach, Isl. Becker, a brook. *Chilman*, kill, a stream.

338. *Chopping*, probably Dan. kjopen. *Cutlove*, Ger. Gottlieb, God-love. *Flashman*, a butcher, Ger. fleisch. *Redyear*, Ger. Rüdiger, *g* being English *y* in some dialects. *Vinegar* (in Pennsylvania,) probably Ger. Wienker.

CHAPTER XIV.

THE VOWELS.

A transcription will become more and more perfect the more nearly it represents the peculiarities of pronunciation, a result which must never be lost sight of, even though it be impossible to attain it.—*Eichhoff*, Parallèle des Langues, Paris, 1836, p. 486.

Such diversities of opinion convey no truth; such a multiplicity of statements of what has been *said*, in no degree teaches us what *is;* such accumulations of indistinct notions, however vast and varied, do not make up one distinct idea. *Whewell*, History of the Inductive Sciences, 1837, vol. 1, p. 240.

339. *If it is difficult to appreciate* vowel variations, it is still more difficult to convey an idea of them in writing; and even with the aid of speech, the teacher may be satisfied with an attempt in the pupil which is far from being exact. Indeed, unless the teacher has an accurate ear and cautious habits, he is not necessarily the best qualified to give instruction in the pronunciation of his own vernacular.

340. *Consonants may be recalled* in all their purity by associating them with the organs which produce them; but time wears away the impression of vowels, and prevents such as are newly heard from being referred to others heard in former years, so that opinions in regard to them must be adopted with caution.

341. *Vowels cannot be described* intelligibly until there is a scale or apparatus by which the exact amount of throat or lip aperture may be indicated, and until then, key words must be used, from which approximations may be deduced. Descriptions of vowels are commonly very loose. For example, Antrim, (Pantography, Philada., 1843, p. 38,) without citing a key word, describes one as "a full sound, seeming to turn back, or cant off from the fulness of *o*—" which to him was a clear account of the sound he assigns to the final of *who*, and the initial of *with*, but equally applicable to *awe*. There are twelve errors in his account of the German alphabet.

342. *Vowels are not musical sounds*, these being made by the varying tension of the vocal ligaments, the tension for the vowels seeming to vary but little, except in song. But as the vowels depend upon the varying capacity of the mouth and pharynx, and as this would modify musical tones, there is an affinity between the two.

343. *Vowels are related to the musical scale* of the cavity of the mouth, as determined by the jewsharp, or in whistling, which, in the same person, have a different compass from the song notes of the glottis; and as the whistling compass comprehends about two octaves, the speaking compass may be assumed as the same. This is the proper basis for a comparison of vowel and musical pitch.

344. *In the vowel mechanism*, although most of the vowels may be produced without exhibiting the more obvious changes in the organs accompanying them, yet their production in the natural mode is accompanied by certain conformations which are useful as collateral indicators. These affect the lips, jaw, tongue, and larynx, the two latter receding and advancing a little to enlarge or diminish the vocal tube or cavity, and of this the tongue is the index. Thus, the advance of the tongue to the teeth in I, E, shows a reduced vocal cavity, whilst its withdrawal in A, O, indicates its enlargement. By this criterion, of the vowels *u*p, *a*t, the former is placed nearer to A, although *a*t is by many considered as a kind of A.

345. *From the opening of the lips* by the retraction of the lateral angles required for I, to their closure for U, there is a gradual series of changes, the principal steps of which correspond with I, E, A, O, U. Of these, I is, in musical phrase, the highest, the vocal cavity being diminished by closure, and its length curtailed by contracting the angles of the lips.

346. *The jaws open gradually* as the lip opening is narrowed from I through E to A (or if this is not sufficiently open, to *awe*,) when they close towards O and U. But Tschnirschnitz makes the jaw opening continue from I to U; and we can unite the jaw position of *awe* to the lip position of O or U, giving rise to sounds which may occur among such as are described in books as "*o* approaching *u*," or "*u* approaching *o*."

347. *There is this difficulty* in determining the vowel by the jaw opening, that the same vowel is not restricted to a particular opening. Thus *a*dd requires a smaller opening than A, yet A can be made with the opening of *a*dd, which may be made with the external aperture of I; but in both cases the additional space required is secured in the pharynx, as proved by the retraction of the tongue. If, therefore, we pass up the vowel scale from A to I, or down from A to U, without opening sufficiently for A at the commencement, we shall find the mouth shut at the extremes of the scale.

348. *In measuring the jaw aperture* (by means of a graduated wedge inserted between

the teeth,) it has been found that ebb requires about $\frac{1}{4}$ inch; *add* about $\frac{4}{16}$; and A, *awe*, from $\frac{6}{16}$ to $\frac{8}{16}$.

349. *This has a practical bearing* on the proper determination of the state and position of a vowel, for as any one may vary a little in aperture without being considered distinct, we must determine or assume a certain phase as normal, and then add a mark for the closer and more open phases. The open phase might be represented by the minute circle used by Lepsius for open consonants, and the close phase by a minute *plus* mark. For example *ŏ*-bey and *o*dd have smaller apertures (are higher notes) than *owe* and *awe*, and they should have some distinguishing mark, but shall we consider *o*dd the standard and give *awe* the opening mark, or do the reverse, and mark odd as a close *awe?* Shall worth be considered a closer worm, *u*rn, or as the normal form?

STOPT VOWELS.

350. *The name of stopt vowels* has been given to certain short English sounds, a term likely to mislead if it is taken to mean a particular kind of vowels, rather than an effect to which any vowel may be subjected, whether connected with other elements, or detached. Thus the short vowels of *it, add, odd, obey,* may be detached and lengthened, without falling into *ee*l, *a*rm, *a*we, *o*we; *ei*ght is nearly as much stopt as *e*t, and there is no more difference in the vowel effect between *it* and *eat*, *lid* and *lead,* than between *load* and *laud.*

351. *In some languages there is a staccato* or stopt effect, as in Chinese, where Medhurst (Dict. p. xxxviii.) writes a syllable kăh,—"the presence of the *h* however does not intimate that the latter part of the word is aspirated, but only that it is contracted and suddenly stopped, before the full sound of the word is completed."*

351*a*. *These stopt vowels* occur in the West African Grébŏ ('the active race,' grĕ a jumper, climber, a monkey; bŏ kind, race,) as in so,pló' the upper arm, (so, arm;) cŭná' knee, γόνυ; cvàcŭrí' palm of the hand (cvă hand, cŭrí' belly; bo leg, bó··cŭrĭ sole of the foot; cva··ca back of the hand; bo··pl··ó foot, a trissyllable, § 168. See the 28th, 29th, and 30th words of the Lord's Prayer in Cherokee, § 624; but the proper mark for the stopt vowels is one which is difficult to print with ordinary type—a Greek aspirate (') inverted (,) and raised to the top of the line. The notation here is that of this essay, with *v* as English *w*.

QUANTITY.

352. *The length of vowels,* and in some cases of consonants, is a most important point of notation, without which books cannot be read as a native would read them, unless the reader has acquired a knowledge of the words independently.

* Perhaps this effect should be indicated by whatever mark is used for the Chinese final *p, t, cay,* (§ 171,) when the breath is not allowed to pass after the consonant, as in allowing the lips to remain closed at the end of *tap.*

353. *Length of syllable* derived from consonants requires no special notation, to show, for example, that *string* is longer than *ring*, and *strips* longer than *rip*, *trip*, *trips*, *strip*.

354. *The length is relative* in vowels,* the longs and shorts becoming shorter in rapid discourse, and longer when it is retarded. But for the sake of illustration, we will assume that vowels have an absolute length. Probably the limit of shortness is about $\frac{1}{12}$ of a second of time, that is, the syllable *ta* cannot be repeated more than thrice in $\frac{1}{4}$ of a second.

355. *The length of a short vowel*, as in *it*, *at*, *et*, *ot*, *ut* is $\frac{1}{4}$ ($\frac{3}{8}$) of a second, but the syllables *is*, *as*, *us*, *ess*, *ox*, are half a second long on account of the continuous consonant.

356. *Long vowels*, like *ah*, *oh*, *owe*, *awe*, *oo-ze* are from $\frac{5}{8}$ to $\frac{6}{8}$ ($\frac{3}{4}$) of a second, the latter being 90 of Mälzell's métronome, with which, and with a watch beating quarter seconds, these results have been obtained.

357. *Medial vowels* are $\frac{3}{8}$ to $\frac{4}{8}$ of a second long. The vowel of *awn* is long, of *on* medial, and of *hŏnest hŏnor* short. There has been much error and confusion in English phonotypy from neglecting medial vowels, especially between *awe* and *odd*. These have been discriminated rather by length than quality, the close lengthened form of *odd* being considered the open *awe*, and the latter, when abbreviated, marked as the close *odd*. Some words have been written both with *awe* or *odd*, as George (Geŏrge Phon. J. June 1847, p. 180; Geōrge id. p. 276; wār, id. 1846, p. 129; wăr, p. 287;) or, for, short, alter, horse.

358. *The following have been spelt* with *awe*:—*au*thor, *au*thority, ex*haust*, *false*, *a*lways, *a*lthough, th*ough*t, qu*a*rter, B*a*ltic; and the following with *odd*:—*o*n (the key word with some) sw*a*n, morn, w*a*rm, cross, across, l*o*ss, long (cf. Ger. lăng,) w*a*s, *o*ften, *o*rthography, c*o*ffin, *o*rder, G*o*d (cf. gŏt,) J*o*hn, w*a*nder (cf. wŏnder,) h*o*g (cf. hŭg, bĭg.)† Compare the quantity of

or	ore	hog	hawk	
swan	swoon	alter	older	
on	own	short	hŭrt	fōrt
horse	hŏarse	cross	crease	crŭsty
long	lung	morn	mōurn	bŭrn.

* Ellis, Essentials of Phonetics, London, 1848, § 9.

† "There are great varieties of opinion and practice respecting the vowel in the words cited, both in England and America. There may be a real difference between *awed* and long *odd*, the latter may be closer. . . . Some of the differences you name arose from Mr. Pitman (speaking by dictionary) preferring a close sound and a stopt vowel in cross, loss, gone, often, office, where a long or medial vowel is often or generally heard in London. In long we never lengthen *o*. The word *god* has the vowel unhistorically lengthened by many," but not opened into *gaud*. "Before *r* there is a dispute as to whether a long or short vowel should be placed. Isaac Pitman, who cannot trill an *r*, prefers the ancient short vowel, which to my mind can only be properly used before trilled *r*. . . . I cannot help thinking that in your experiments on the length of vowels, you must, by the process of measuring the time, have been led to take the consonants into account."—*A. J. Ellis, MS.*

NOTATION OF QUANTITY.

359. *The Romans considered the vowels* as naturally short. They are naturally long, the consonants being naturally short. Long vowels were the first discriminated and supplied with characters, and in alphabets which do not discriminate between the two, it is safe to infer that the character was made for the long sound.* Theoretically, therefore, there should be no necessity to mark the long vowels or the short consonants.

360. *The marks of quantity* should be placed above or after the characters, the former being preferable. In the latter case the mark of accent should surmount that of quantity. The number of diacritics would not disfigure the page, provided each were significant. It is only when they are meaningless that marks offend the eye, as in placing five dots over rijiditi, and yet these dots would not offend in a line of staccatoed music. Böhtlingk has many Jakutish words in a modified Russian orthography, as kypÿöjäx (a deserter,) where 'p' is *r*, and 'x' χ. Sometimes these dots are surmounted by marks of length. Castrên has Samojedic spellings like küjü (birch) üjü (foot;) and there is a lake Abijijis in the State of Maine, and Ujiji in Africa. Compare Fiji, ὀῤῥὸς (whey,) and Turkish qyjyq (oblique,) a form which shows that strangeness of appearance is as much due to new combinations of familiar letters, as to new characters.

361. *If the longs and shorts were marked* (¯˘) the medials might be left unmarked, including such about which the writer hesitates—or, these might be marked with a superior dot (a·) immediately after the letter. In Hebrew, three degrees of quantity are recognised, long, short, and very short; and in Sanscrit a figure 3 is used to denote a very long vowel. Let us use figures to denote length in approximate or nominal eighths of a second, as in fa^2n a^2t i^2c, fa^3n, a^5r m (including the quantity of *r*,) O^8! is a full second, or a beat of the metronome at 60.

362. *In the following Cherokee* read c as *k* flat (§ 181,) e strictly as in *they*, *weight* (avoiding *ebb*,) a in *art;* ι as in *it;* o strictly as a true short O in *note*, *obey;* and V as English *w*. Then we have—

ce^{2}hι$^{2\prime}$ (cĕhι′) *far*,	ce^{8}hι$^{2\prime}$ (ce^{8}hι′) *very far*,
na^{3}cvo$^{2\prime}$ (nacvó) *near*,	na^{8}cvŏ′ (nācvó) *very near*.

363. *The Cherokee word for wind* (used figuratively for *smoke*) has the three vowels of *foot, war, ebb*, (ŭ, ɑ, ɛ,) that of *war* being the open vowel of *awe*, with a medial quantity. the word is ŭ^{2}nɑ^{3}l$\acute{e}$, and it occurs disguised in the following word, where medial vowels

* "In most languages the short vowels are not so accurately differenced as the long ones; this is the reason why the former were not indicated at all in the most ancient languages."—*Lepsius*, Alphabet, p. 51.

are unmarked, ʉ in *up*, pure and nasal, i in *feet;* the acute accentual marks *a short accented vowel*, and the grave would be used for a long one.

tĭovʉ̆tʉ̆nɑ̨lʉ̨̆tēstʊ̀'—

used by an old chief at a council, and incorrectly rendered by the interpreter—"the wind blowing from my direction will indicate where I am"—because the ordinary word for *smoke* was replaced by that for wind. On the prairies a column of smoke is a prominent object which may be seen at a great distance. The speaker wished to convey the idea that—"the distant smoke ascending from my fire will inform you where I am," or, "the smoke at a distance will rise in the air from the place where I am," tĭ, *at a distance*; ʊva[3] connects the subject with the speaker, the next *t* is probably a fulcrum to prevent the concurrence of the two vowels: tēstʊ', *shall be blowing.*

364. *Quantity can be indicated* in two other modes, and although the appearance of a printed page (whether of speech or music,) is secondary to its accuracy in depicting definite phenomena, these modes will offend the eye less than the normal Latin mode. There are three variations in the width of type, named *extended*, *medium* and *condensed*, and these would answer extremely well for the three lengths of vowels, except that ɪ, i, are not distinct.* The following are examples:—

Extended, AEIOUY aeiouy.
Medium, A E I O U Y a e i o u y.
Condensed, A E I O U Y a e i o u y.

465. *In Italic typography*, the termination of *a, e, i, u,* might be cut off at its lowest point, and be supplied with a separate type like that used to add a little flourish to finals in script printing. This addition could be broader or narrower according to the length of the vowel.†

366. *Quantity is influenced by consonants.* Sonants, which have length themselves, may accompany long vowels, and surds may accompany short ones. In the following pairs, the second is longer than the first; and in German, zeichen *token*, is shorter than zeig-en, to in-*dic*-ate.

* "As short vowels and consonants are generally more frequent, it is practically most convenient to mark length only. . . . The condensed, medium, and broad-faced type would be very troublesome to distinguish accurately by the eye. I do not think you would approve of it if you had twenty pages of such type (especially in small fonts) to read." *Ellis*, MS.

† An economic provisional typography could be made by using italics (or small Roman letters) and spaces, but excluding capitals. Let the first and second line of *u, n, r, a, d, p, b, g, q, y, h, k*, be formed of separate types, some of them meaning nothing except in combination; let a few new marks be made (like _ to form ɪ_ for *i*, to avoid the dot,) and let the required letters be built up from these, as in music printing. Dr. Rapp (Grundriss, Vol. II., p. 8, &c.,) has formed in this manner a character for *ng* out of *ŋ* (inverted italic *l*) the two members being not quite in contact.

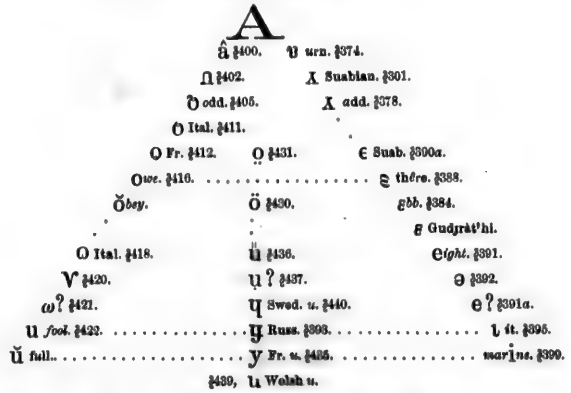
fĭerce	fēars	lĕaf	lēave	strĭfe	strīve	heĭght	hīde
late	laid	leak	league	bat	bad	joint	joined
rope	robe	feet	feed	hart	hard	lout	loud.

367. *Consonants have a recognised quantity* in Dacòta, where *s* and *sh* occur short and long. "When marked thus (s') the sound is prolonged." (Riggs' Dictionary, Washington, 1852.) Thus s'a (sh¯a) is *red*, and s''a (sh¯a) to *shout*. Dr. Lepsius has improperly transferred the mark of shortness to '*s*' to represent English *sh*, and to '*z*' for *zh*. *a*. The *n* is long in Italian sĕdénḍo púñto (point,) but not in Spanish, which has it in 'Cervantes' =θĕrɪ́ántɛs, where it bears the accent.

368. *The length of continuous consonants* may vary with the sonant or surd phase of the succeeding one, as the short secondary vowels are seldom lengthened in English. The following are examples of n, l, ng, r, m, s, thus lengthened.

sin¯ce	sin¯s	han¯k	hang¯d	blur¯t	blurr¯d	dam¯pt	dam¯nd
pinch	impinge	pence	pens	else	ells	dos¯ed	doz¯d
dint	dinned	wilt	willed	start	starred	etch¯t	edg¯ed.

369. SCHEME OF THE VOWELS.



370. *The most characteristic* of the vowels is that in *arm, art, father,* commonly named Italian A. It is almost universally represented by its proper letter A, a, *a*, which cannot be departed from except to degrade the system of notation, and in some degree to injure the etymologic uses of the Roman alphabet. For if 'A' may represent an E sound to accommodate some English words, it should represent O (as in *nose* from nāsŭs,) to accommodate those languages where the interchange seems to be on the labial side, as in Russian, Tawgy-Samojedic (Castrén, § 7,) and Hungarian. (Dankovszky's Lexicon, 1833, p. 10.)

371. *By corrupting* 'A' to an E power, and refusing to show that I and U have acquired it in becoming A'J and A'V; or, by exhibiting 'A' as the representative of a closer sound than it was made to represent, and by keeping back the coalescent consonants to their vowel basis, instead of representing diphthongs by their true elementary characters—the English vowel scale is attempted to be kept within the range of nos. 2, 3, of the scale in § 246–7.

372. *The following are inscriptive forms* of A, the first being the Phenician and Hebrew original, after the hieroglyphic form was left. The others are Greek.

Of these, nos. 2, 9, justify a, *a;* and a form based on '&' with the upper loop removed; nos. 4, 5, would justify capitals on these bases, and the Phonetic Journal character, an a reversed (the loop on the right) for the small letter; and nos. 4, 5, 6, would round into an italic *v.*

373. *The Sanscrit analogue* of Latin A is assigned the power of *u*p by Sir Wm. Jones, and by Wilkins (Sanscrit Grammar, London, 1808.) When it is long, the latter says that—"in kāld *time* the first syllable is pronounced nearly like the English word *call*—" a sound which Vans Kennedy says "does not exist in India." He says too, that "North of the Krishna the short *a* is like *u* in *sun*, south of it, long *a* is pure, and the short sound as in *hand*." The vowels of *up* and *at* are extremely doubtful as Sanscrit elements. The proper character for A (a, *a,*) is used by Pickering,* 1831; Eichhoff, 1836; Comstock, 1846; J. P. Hart's World's English, (Newhaven, U. S., 1851;) Müller, 1855; Lepsius, 1855; Ellis, 1856. In the local English alphabets, Pitman (Phon. J., 1857,) and Graham (Phon. Quarterly,) use a reversed a; Masquerier, (New York, 1847,) italic *a.*

ɐ, ʊ, in *urn.*

374. *Many languages want this vowel*, which is so common in English as to be regarded as the characteristic of the vowels. It has not been assigned to Greek, Italian, Spanish, nor German, but it occurs in dialectic German. It has nothing to do with the labial vowels O, U, and to represent it by an *o* or *u* character would falsify its affinities. It is close (ʊ) in *up, wŏrth,* and open (ɐ) in wŏrm, wŏrd, urn. The effect of *worth* is that of a short syllable, each element being short, (the *r* close;) whilst *worm* is long on account of the open and longer *r.* The vowel *u*p is nasal in the French *un;* but M. Pantoléon (in Comstock's Phon. Mag.) makes this a nasal *eu* in *jeu,* and Lepsius refers it to German ö.

375. *In the writer's French* pronunciation, *u*p is placed in mĕ, quĕ, quĕrelle, &c., according to the view of most French grammarians, but Lepsius and Ellis consider it a variety

* On the adoption of a uniform orthography for the Indian Languages of North America. Memoirs of the American Academy, 1831, iv., 319.

of *ö* or *eu*, in which they may be correct. Lepsius writes it *o̤*, and Ellis (preferably) with a reversed (not inverted) e character.

376. *The character chosen* is sufficiently distinct, even were the sound not allied to A and E. A script form can be made without raising the pen to make the loop, and it may recall *r*, with which ʊ is allied. In fact, there seems to be a palatal (or middle mouth) *coalescent* in Irish, between *up* and a short open smooth *r*, as in the monosyllabic word ɢʊē *wind*, as distinguished from ɢē goose, but the former word varies dialectically. The effect strikes the ear somewhat like *gŏ-way, go-ay*, compressed into a monosyllable; but there is no *o, oo, w* sound. This element requires verification in nature, as it has not been heard recently, and the language has been very seldom heard.

377. *Ellis represents the vowel of up* by ɐ;* Max Müller by a cipher 0; Lepsius by *o̤;* Bishop Wilkins (Real Character, 1668,) by y with a terminal flourish; Hale† by a character like inverted Ω; Rapp, *ɐ;* Pitman, ᵾ; (Comstock, ᵾ, u; Longley, U, u; Antrim, o; and H. M. Parkhurst, u (Ploughshare, Boston, U. S., 1853.) It is doubtful whether the modification for open and close, should be made in the upper hook or lower dot; but the former is preferred, because it leaves the character more distinct from e.

Ʌ, ʌ, (ɑ, ɑ,) in *add*.

378. *With very little affinity* to A, this sound usurps its character in some alphabets. It is more nearly allied to ebb, but not enough to have a letter on the same basis, like that of Lepsius. Rapp writes it ä; Comstock, Ʌ, ɑ, Hart ä, Masquerier **ɑ**, ɑ; and Pitman, Graham, Parkhurst, Kneeland, and Longley A, a.

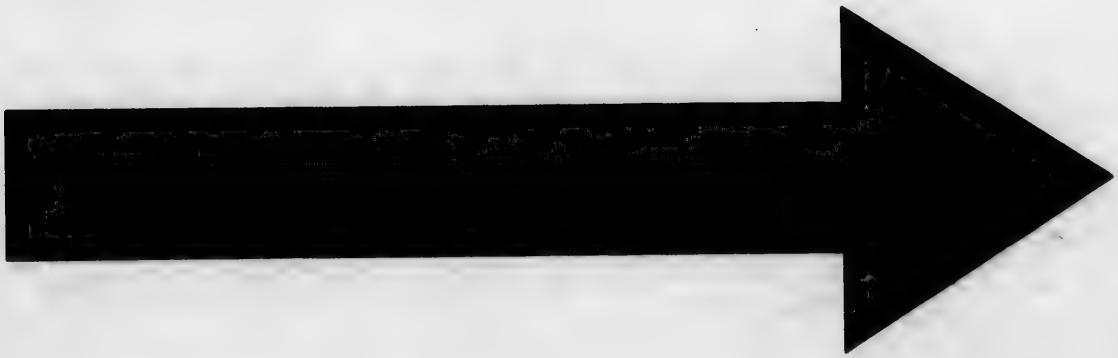
379. *The people of Bath, England*, are said to pronounce the name of the town long (= bɪθ‡) and it is strictly long and short in Welsh, as in bɪ̆χ a hook; bɪ̄χ little. It seems to be lengthened in the following words, but as the author speaks this dialect,§ the observation must be accepted with caution.

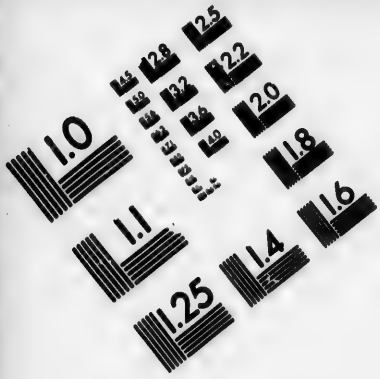
* Universal writing and printing with ordinary letters, Edinb., 1856.

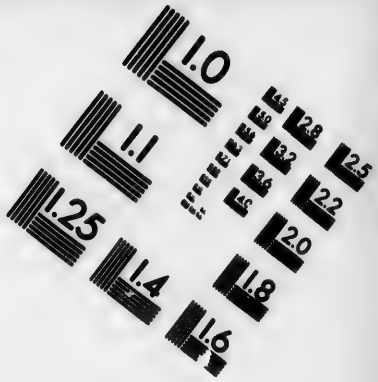
† Ethnography and Philology of the U. S. Exploring Expedition, 1846. A valuable work philologically, but not phonetically. He does not think it necessary to indicate French *u;* he uses A for the power in *mart, mat*, (but, probably, did he hear the latter;) E for *fate, met;* I for *machine, pin*—p. xii. 1846.

‡ The Rev. J. G. Woods (Sketches of Animal Life, 2d Series, London 1855, p. 247,) mentions "The singular mode of pronouncing the word which is used by those who have resided there. Instead of enunciating the word Bath in a clear and open manner, it appears to be correct to elongate it into an effeminate drawl, thus—B-a-a-a-ath, pronouncing the vowel like *a* in cat." "The sound is common over Wilts and Somerset, and it may extend to Gloucester and *South* Wales. . . . The long sound is the name of the first letter of the alphabet in Irish English. . . . Our ladies *often* say *graas, caalf, haalf, paas, aask*. Many orthoepists (Worcester and Bell,) have recognised an intermediate vowel."—*Ellis, MS. note.*

§ Heard in Philadelphia, and used by Walker, who puts his *a*‘ of *fat*, in grass, grasp, branch, grant, pass, fast, the proper sound being probably French â, as in pâss, &c.







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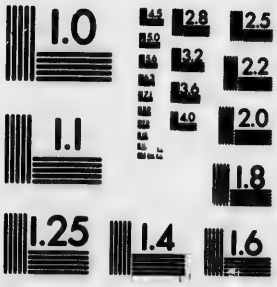

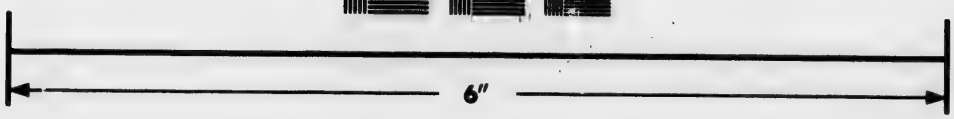

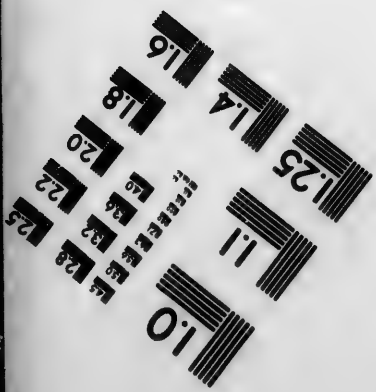

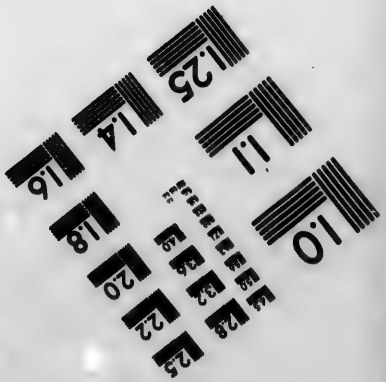

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pān	pănic	dām	hăm	mādder, *adj.*	mădder
band	banish	dram	ram	ma'am	mammon
fan	fancy	lamb	lamp	baa	badger
man	tan	bad	pad	gas, gaz	gash, as
can, *n.*	can, *verb.*	glad	lad	lass	lash
bran	ran	bag	tag, beg	brêad	bred
Ann	an, Anna	cag	wag, keg	dead	Dedham
Sam	sample	drag	dragon	bed	sped.

380. *It occurs in provincial German*, as in bɪ′rɪc, (with the vowels of bărrĭer) for *berg* (bɛrG) a hill. A native of Gerstungen (= Gérstŭʃən) in Saxe Weimer, pronounced the first syllable of this name with ɪ in *arrow*. Compare thatch, deck; catch, † ketch; have, † hev; scalp, † scelp; German and English fett *fat;* krebs *crab;* fest *fast*, adj.; Gr. τρέχω (I run,) *track.*

381. *It has a long and open* German provincial (Suabian) form, being used for long open ä (ê) as in bɪ¯r (bær) for bär, (a bear.) This bears the same relation to *a*dd that French ê in même bears to *e* in *memory*.

382. *This vowel is nasalised* and short in the French *fin* (end) =fɪ,; *pain* (bread) = pɪ,. But some consider this a nasal of *e*bb,* either because such a sound is used, (the Polish e, ?) or because the French (being without the pure *a*dd) refer their nasal *in* to the nearest pure sound known to them.

383. *The character* ɪ *is a good one*, and may be written with Greek *a*, into which '&' degenerates in writing. The Anglish æ is accessible for the open sound, whilst a small 'ꞓ' would admit of being trimmed into several distinct shapes for varieties of sound.

ɛ, ɛ, in *ebb*.

384. *Most writers pervert* 'e' to the use of this sound, an error which arose from regarding the vowels of *they them* as variations in quantity. If the Roman alphabet is to be adhered to (ɛ) the half of 'e' might be used for it, but a Romanised form of Greek ε (like that of Mr. Pitman) is much to be preferred,—and it is shown as a Greek form in Franz, p. 245, line 10 from below.

385. *The secondary vowels* it, *e*bb, were not allowed to Latin, (§ 93) because there is no evidence that they were Latin sounds; and although *e*bb occurs in Spanish† (as in el *the*,

* Value compares nasal *in* to English *ain* in *faint;* Bolmar to *en* in *length;* Gouraud to *en* in *lent;* and Picot to *an* in *vanquish*. Pantoléon puts the *e* of 'thêre' (nasal) in Fr. *point, pain, sein*, and of 'end' in *bien, moyen*.

† Even this is not admitted in Cubi's "Nuevo Sistema" (of English for Spaniards,) published by I. Pitman, Bath, 1851—where the vowels of *ill, ell, am, up, olive*, are not provided with Spanish key words; but he assigns the whole of them to Catalonian.

estē *this one,*) it is not near as frequent as an Englishman might suppose. The following examples are from Vingut's Spanish Grammar (New York, 1853,) with his pronunciation in English spelling—but we think that some of these have ɛ.

paréntesis	pa-rain-tai-sees	tenedor	tainaidór
crisis	creesees	comodidad	co-mó-dee-dad
jeneral	hai-nai-ral	felicitar	faileetheetar
médico	mai-dee-co	Asiatico	Ah-see-áh-tee-co
tres (Lat. TRES)	trais	entre	aintray
frecuentamente	fraikwaintaimaíntay	pez (fish)	paith.

Nor has E become ɛ in French, where it might be expected from English Latin, as in élégant, éléphant, élégie, émétique, nécéssité, effacer, exact, et;—and for que, le, me, ne, de, cela, doucement, vivement,—Vadé puts qué, mé, vivément, &c., in the mouth of a Gascon.

386. *The vowel* ɛ *occurs in* Italian témpo, tẹ́rră, Mɛrcùrĭŏ; in the German réchnung (a reckoning;) pelz (pelt, fur,) schmeltzen (to smelt,) rector (rector.) German short ä (ɛ) often falls into this sound, as in prächtig (sumptuous.) In Ellenic, ɛ and αι are alike, as in *set, said.*

387. *Frenchmen state that* ɛ *occurs* in elle, quel, règle; M. Value gives *get* as the key word for è and ê; Bolmar gives *mare* for è, and *there* (when emphatic) for ê; and Pantoléon puts e of *there* in est, les, vrai, mais, and that of *ebb* in elle, quelque, cher, superb, aime. He writes *tu avais* with the former, and *il avait* with the latter, whilst Bolmar makes them both è.

ɛ, ϵ, (ê, ϵ,) in *there.*

388. *The vowel of ebb,* with a more open aperture, is long and accented in the Italian mɛ dĭcŏ, tɛmpɛ stă, cĭêlo, and short in the verb e (is,) ăb-biĕt-to. It is the French ê in même, tête, fenêtre, maître, haie, Aix (=ɛs,) air, vaisseau. The same sound seems to occur shorter in trompette, which is not the vowel of *petty.* It occurs in the Coordish fɛ̈d (a pack on a horse,) with smooth *r.* Volney writes it *ai;* Lepsius, ē (in "Fr. mère, Ger. bär;") Comstock a good character (§ 398,) but he considers it the representative of a double sound, as in thê-ur for *there.*

389. *It is the German* ä long in mähre (mare,) mährchen, fehlen, kehle, währe, but *wehre* has E long. The theoretic short sound (ϵ) falls into ɛ, as in ställe (stalls,) commonly pronounced like stelle (station.) In German, the letters ä, ö, ü, are sometimes more correctly printed with a minute (°) instead of the dots, and Zieman* has restricted the dotted characters to the short sounds, and the others to the long ones.

* Mittelhochdeutsches Wörterbuch, 1838.

390. *The character preferred* here is a modification of *ε*, being (ϵ) a form of Greek type in use, to be assigned to French è. If the Roman alphabet is adhered to, the type can be made by cutting away the right half of 'e;' and ê can be made in the same manner, retaining the circumflex,—or excluding it, and mutilating the type less than for è, giving it the appearance of Anglish ϵ. But (ɛ) a character formed from (*ω*) Greek oméga, is preferred for the ê sound, and accentualised letters are not to be used to indicate quality. *a.* We quote here doubtfully, a Suabian open vowel perhaps between there and *up*, and heard in reiten, seide, weiss, fenster, stĕllĕ, and in rēgen (to move,) whilst rêgen (rain) has ê.

ɐ, in *vēin, ĕight.*

391. *The English ay* in pay, paid, day, weigh, ale, rage, is short in weight, hate, acre, A˘mos, A˘bram, ape, plague, spade. German wēh (wo,)ˆrēh (roe,) jē, planēt, mēer, mēhr (more, but mähr *tidings* has ê,) ēdel, ēhre, jĕdŏch. The Italian "e chiuso" has this quality, as in màlĕ, ottóbrĕ (with "o chiuso,") but it is nearly always short. Most authors assign this sound to French é, called 'é fermé,' but Dr. Latham assigns this é a closer aperture, for he says—"This is a sound allied to, but different from, the *a* in *fate*, and the *ee* in *feet*. It is intermediate to the two." *a.* Dankovszky says the Hungarian "é est medius sonus inter e et i," but his 'e' is uncertain. Olivier (Les Sons de la Parole, 1844,) makes é identic with I in the position of the mouth.

ɵ in *-ment, -ence.*

392. *There is an obscure vowel* in English, having more aperture than that of *ill*, and less than that of *ail*. It is used to separate consonants by such an amount of vocality as may be secured without setting the organs for a particular vowel. It is most readily determined between surds, and it is often confounded and perhaps interchanged with the vowel of *up*. It occurs in the natural pronunciation of the last syllable of worded, blended, splendid, sordid, livid, ballad, salad, surfeit, buffet, opposes, doses, roses, losses, misses, poorer, horror, Christian, onion, and the suffixes -ment, -ant, -ance, -ent, -ence.

392*a*. Perhaps this vowel should be indicated by the least mark for the phase of the least distinctness (§ 484,)—a dot beneath the letter of some recognised vowel of about the same aperture. It is so evanescent, that it is often replaced by a consonant vocality without attracting attention, as in saying hors'z, horsz, horszs, or (using a faint smooth *r*,) hors'z.

392*b*. *Rapp uses* 'ə' for this sound, and for the closer form allied to *urn*, placing it in must, honey, *a*, an, master, fever. H. M. Parkhurst uses a tailed 'e' in présent, convenient, universe, order, and in the suffixes -er, -ent, -ency, -ment; and the vowel of *up*, in up, money, impression, occur, some. Longley uses e in earth, verb, first, person, deserve, sir,

skirt, thirty, verge,—using the vowel of *ebb* in very, discovery, another, interest, and that of *up* in worse; so that he can hardly have the Irish dialect in view. Graham proposes a peculiar 'e' for her, bird.

392*c*. *With Rapp*, we assign this vowel to German, as in welches, verlīeren, verlăssen (or even frlásn.) The vowel of *up* is not admissible in normal German, although it is common enough in dialects, and associated with short *o*, as in *kopf, toll*. In our examples, the theoretical vowel is that of *ebb*.

Ꭹ, the Russian ы. (ɣ, in Turkish.)

393. *This vowel strikes the ear* like the pinched German ö, ü, to which series it may belong; but the lips are not pursed, the effect being due to the enlarged cavity of the mouth. The quality is perhaps nearest to the vowel of *if*, but the jaws are more separated, and the lips are retracted as for I. It is long and short, and is said to be the sound represented in Polish by y. Eichhoff (1836) uses 'y' for it; Castrén (1854) the same, with an angular circumflex when long; and Ellis uses a small capital ʏ. We propose a character formed from inverted fi, which is sufficiently distinct, whilst it bears some resemblance to the Russian and Polish forms—and 'y' must be restricted to its historic value.

393*a*. *Castrén mentions this* as a Sămŏjēdĭc vowel, and he says that in making it, the end of the tongue is prest against the base of the lower teeth. § 344. He states that in several dialects, 'i,' in certain conditions, has something of this sound.

394. *This Slavonic vowel* occurs in Jakutish (Böhtlingk,) and is probably the key to an Altai-Tatar infusion, as it is said by Redhouse and Böhtlingk to occur in Turkish. But S'uñic', who quotes Turkish very freely, in illustration of the elements, does not admit it. We have not been able to compare the two, having heard them with an interval of six years. They are closely allied, and our impression is that the Russian phase is based on *ooze*, and the Turkish on *is*.

ɪ, in *pit*.

395. *The English vowel of it, pit, pin*, &c., frequently formed out of a shortened I, and as 'e' is one of its equivalents, it often takes the secondary power, as in bĕlieve, rĕgret, dĕscend, which cannot differ from dĭspose;* and we find in old English—biginnan, 1250; began, bithoute, 1280, without the unenglish *gh;* and Chaucer uses dispise, discent.

396. *It is the German vowel* of kĭnn (chin,) hĭtzĭg, bĭllĭg, wĭll, bĭld; and the initial of the Belgian diphthong *ieuw* (and perhaps, in some cases, the Welsh *uw*.) It is adopted for the English *u* in *tube*, (tĭwb) in Comstock's alphabet—a diphthong known to the writer.

*See the Phonotypic Journal, 1846, for this vowel in select, secure, review, degree, defect, desire, dĭsease, denote, prepare, December, and many more.

397. The form is accessible in a mutilated (U, u, t,) and it will best suit the languages in which I, J, are used correctly, among which it is hoped English will be one. Thus the series J I U will exhibit normal I turning to J in the closing, and U in the opening direction; and there are good reasons why they should resemble. Their affinity causes an interchange in Chris-tian (ʧɪstˀɔɟən, -tˀɔɟən, or -tʃən,) with J, and Chris-ti-anity with U. Compare o-li-o, o-lio (óliʊ, óljo,) fil-i-al, fil-ial, foliate, folio; il-i-ad, il-iad, va-ri-ous, va-rious, cordial-ity, idiot, previous, devious.

398. *This vowel is commonly confounded* with I, but it has a more open jaw aperture, whilst each may be lengthened or shortened. When made long, it suggests long ɣ, but they differ. The following notations have been proposed for e in *they*, ɛ in *them*, ɛ *there*, i in *he*, and ɪ in *his*.

	e	ɛ	ɛ	i	ɪ
Rapp, 1836,	ê	è	ä	î	i
Lepsius, 1855,	ē	ę	ę̄	ī	ĭ
Max Müller, 1855,	e	e	ä	î	i
Ellis, 1856,	e	ɛ	ɛɛ	i	ɪ
Pitman, 1856,	ɛ	e	ɛ	ɹ	i
Pitman, Jan., 1852,	"	"	"	ɪ	"
Graham, Adair,	"	"	"	ɹ	"
Kneeland, 1824,	á	"	à	è	"
Hart, 1851,	e	ë	ä	i	ï
Comstock, 1846,	"	ɛ	ɒ	ɪ*	ɪ
Masquerier, 1847,	a	E		e	i
Antrim, 1843,	ɷ	a		"	y
Haldeman, 1846.	e	ɛ		i	ɪ
Reynolds, 1846, (§545)	"	"		"	"
Hale, 1846; Matushik, 1837,	"	e		"	i
Poklukar, Sˈuñicˈ, &c.,	"	"		"	"

I, ɪ, *i*, in field.

399. *The universal* I, is long in Italian ìŏ (Lat. EGO, *I*,) and short in fĕlĭcĭtārĕ, with true e. In English it is long in machīne, marīne, fīend, fee, tea, bee, grieve, eel. It is

* Perverting I to *eye*. In citing the powers of English 'i,' that of *marine* is omitted, and not because it is i-e, for *e*, and not e—e is cited for the power in *eve*. The sixteen tone marks of "Comstock's Perfect Alphabet" . . . . "not only represent *accent*, but *inflection* and *intonation* or melody." But as these differ as much as *stress* and *pitch* in music, they cannot be represented by the same mark in a rational system. The inflection of unaccented syllables is not marked, hence (p. 27) although "refined," and "region," close sentences, the final syllable of the latter is represented as unaffected, and the first syllable as falling, because this mark means both falling inflection and accent. This notation has been used by its author since 1841.

short in ĕqual, ĕduce, deceit, heat, beet, reef, grief, teeth. *German examples* are vĭch, wĭeder (against,) wĭder (again,) wĭe vĭel (how much,) vĭelleicht (perhaps.) It is medial in knie (knee.) *French examples* are surprĭse, vĭve, ĭle, stўle, ĭl, vĭf, phўsĭque, ĭmĭter, lĭquĭde, vĭsĭte, polĭtĭque, which must *not* be pronounced like the English *physic*, &c., with the vowel of *pit*. The following are perhaps medial,—prodige, cidre, ligue, vite, empire.

A, (ʌ, ɑ,) in *āisle, Cāiro.* (§ 372, 4, 5.)

400. *Proceeding in the labial direction* from A, the first element is French *a* in âme, pătte. The former is commonly received as the vowel of *arm*, the latter of *pat*. Duponceau* in 1817 made the distinction. He says that French *a* occurs in the English diphthongs *i* and *ou*, and that the sound is between *ah* and *awe*, being *ah* pronounced as full and broadly as possible without falling into *awe*. The initial of English *i* (or *e* in *hĕight*,) differs in being pronounced *u*p and *a*t; whilst the orthography '*ou*' was partly intended to represent the French vowel of *could*, and partly the Saxon (Plattdeutsch) diphthong, which we have heard, and consider to have the initial of *odd*.

401. Ellis uses *a* with a horizontal medial line for it, and Comstock ʌ, and a lower case form (ɑ) with the base open, and the left branch turned outwards. Pantoléon admits this sound when short, as in a, la, pas, ma, e^{n}, il a, and in both syllables of voila, avoir; but he places the true A in a^{n}, tu a, car, toi, voix, naïf, matelot. This is probably the proper vowel for grass, grant, pass, alas, (Fr. hélas.) See § 379, note. When accessible, we prefer Mr. Pitman's reversed a for French â.

ɑ, (ɒ) in *awe.*

402. *This sound lies between* A and O, and is common in several German dialects, and in Bengalee, where nɑ's is *nine*. The Germans represent it very commonly by å, adopting the Swedish mode, where however the sound seems to be a kind of *o*. Franz, Epigraph. Gr. p. 246, line 1, has a Greek character very like ɔ.

403. *This* awe *is not to be determined* by its length, but by its quality. It is *long* in raw, flaw, law, caw, all, pall, call, thawed, laud, hawk;—*medial* in loss, cross, tossed, frost, long, song, strong, or, for, lord, order, border, war, warrior, corn, adorn, born, warn, horn, morn, storm, form, warm, normal, cork, wan, swan, dawn, fond, bond, pond, exhaust, false, often, soften, gorge, George;—and *short* in squăsh, wăsh, (cf. rush, push,) ăuthor, (cf. ŏath, pĭth,) watch, wăter, slaughter, quart, quarter, wart, short, mortar, horse, (cf. curse,) remorse, former, often, north, moth, fault, falter, paltry.

404. *For the vowel pair in awe, odd,* Ellis uses ɔɔ,† ɔ;† Comstock, Pitman and Graham ɷ, o; Bishop Wilkins Greek *a*; Hale *ɑ* in a single character; Hart and Kneeland O with a horizontal medial line; Parkhurst ɔ,† o; Lepsius ō, ǫ; Masquerier o, using one sign for

* Am. Phil. Trans., 1818, Vol. I, p. 258.

† With the appendage on the right.

both, (like Wilkins, Hale, and Hart,) a sign made of b,—and d, p, q, would afford allied ones. For common typography, we propose ɑ, ɔ, with ɛı (closed) as the writing form of ɑ or its varieties.

ɔ in *odd*.

405. *This differs from the preceding* in being formed with less aperture. It is *short* in not, nod, hod, what, squătter (cf. the open wăter,) morrow, borrow, sorrow, horror, choice, ponder, throng, prong; *medial* in on, yon, John, God, rod, gone, aught, thought, bought, caught, naught, fought, sauce, loiter, boy, and perhaps long in coy, oil. Some of these medials may belong to *awe*, and some of those to this head.

406. *The accuracy of these examples* is not expected to be admitted in detail, because practice between the two vowels is not uniform; yet it is probable that no one puts the vowel of *potter* or the quantity of *fall*, in *water*, which is neither wāwter nor wŏtter. In the following table, the medial examples have been chosen without regard to the vowel they contain.

gāud	God	nŏd	gnaw'r	nor	Nŏr'ich
awe	or	orange	rawed	rod	Rodney
fawned	fond	astonish	awed	aught	odd
thawed	thought	Thoth	laws	loss	lózenge

407. *In the next table*, No. 1 is the long, 2 the short, and 3 the medial quantity of *awe;* 4 is the medial and 5 the short quantity of *odd*.

1.	pāwned	wāw	squāw	yāwn	hāw
2.	ăuthor	wăter	squăsh	wănt	hŏrse
3.	po^{3}nd	wa^{3}r	swa^{3}n	wa^{3}n	ho^{3}rn
4.	ro^{3}d	Go^{3}d	thou^{3}ght	go^{3}ne	Jo^{3}hn
5.	pŏnder	bŏdy	squăt	hŏnest	hŏrror

408. *Indications of quantity* cannot be dispensed with here. ɔ, (or whatever character is used) might stand for the vowel of *odd*, and havė a widened form, or a superior dot (·) *after* the letter, for its medials; whilst ɑ (or its representative) might be considered medial, and have a long mark for *awe*, since the medials of the close vowel, and the longs of the open one are the rarest.

409. *It is a difficult problem* to supply *awe* and *odd* with suitable characters. They have no more right to be formed on an 'O' than on an 'A' basis, and the available forms of 'O' should not be drawn upon too largely for English, being required for French *o*, the two Italian kinds, and perhaps others among described or undetected phases. *a*. ɐ, ɑ, or ɒ, ɑ, would form a good pair, and they recall A, O, but ɑ is perhaps too much like n for blurred print. The preceding, with ɔ, are not sufficiently alike, because the medial

quantities may be confused by the same person in the same word. Other pairs are furnished by the rejected forms of the Phonotypic Journal, as ɑ, ɑ, or ɐ.

410. *The chief difficulty* is in finding approximate forms which can be readily made with the pen. One of the preceding forms might answer for the open sound of *awe*, and ɷ (which approaches Gothic O,) for the close one. The 'A' part of the latter could be so much reduced as to make the character approach ɷ, with the mark in contact. A pair like ɷ with the upper or *o* part large for *odd*, and ɐ the lower or *a* part large for *awe*, would solve the problem in print, but they would be likely to take an *e* form in writing. A writing character formed of *ɛı* united, would answer for the *awe*, and the script *a* recommended for *aisle* (the middle of the *i* portion broken towards the left,) for the closer sound; or, the closed *ɛı* character (Hale's *aw* long and short,) might have the close power, and have the *ı* part descending in a short tail, for the open sound, or the *ɛ* portion with the break thrown to the left.

O, Italian "*o aperto.*"

411. *To an unfamiliar ear* this vowel is referred at one time to O and at another to *awe*, and if an Italian speaks English with it, the word *bold* seems to be *bald*, and *bald* seems *bold*. It is long in 'póco,' little; pórtō, port; spóso, husband; and short in tróppo, too much; nóttĕ, night; cósă, thing. Mr. Ellis's key words are rōco (hoarse,) and rŏcco (crozier,) and he refers to this sound, Swedish *a°* and Danish *aa;* and with doubt the French vowel of *hotte, homme*, with which we do not agree. Mr. Ellis's character is a good one, a Q form with the tail on the left—which might *end with a dot* when the vowel is short. Dr. Comstock uses O with a minute vertical tail below, for the short vowel of Fr. bonne (good,) Ital. dotto (learned;) and he places the vowel of *own* in the French trône (throne,) and Italian dolce (sweet,) the latter being "*o chiuso*" of the Italian grammarians. An Italian grammarian compares the "*o aperto*" to the French *o* in hotte—"l' O aperto detto da Francèsi *aigu* o *bref*, ha il suono dell 'O aperto toscano, come *hotte* (o-t.)"

O, French *o*.

412. *This sound seems* to the writer to be more open than *owe*, and closer than *o* aperto, and his impression is that the long and short sound have the same quality.* Gouraud

* The Author's French pronunciation was acquired from heterogeneous sources, chiefly English and German, and although he has occasionally revised it in casual intercourse with Frenchmen, early habits are continually crossing later opinions. His practice is to pronounce ô as *owe*, bŏnne as English *bone* shortened, and mŏn with the same nasalised. His ideas of Spanish pronunciation were derived from a South American, whilst his English is partly provincial. On the other hand, his ear is good enough to enable him to tune a piano, (except in the low bass notes,) and to distinguish across a room whether a speaker of German uses the German *w* or English *v*, *provided* the voice is familiar.

cites three kinds of French *o*, referring that of poste, note, code, to *o* in *not;* sort, mort, corde, to Eng. *nor;* and côte, faute, beau, to Eng. *note.*

413. *Bolmar admits two,* the *o* of Eng. *opera* in opéra, homme, loge, remords, offense, comme, notre; and *o* of *over,* in auteur, ôter, impôt, zero, faute, rose. Value admits two, as in Eng. *no, nor;* and Pantoléon two, the first (without English equivalent,) in bonne, homme, trop, au, porter, octobre; the second (in Eng. *old,*) as in trône, eau, beau, matelot.

414. *Picot admits two,* the first "close, that of *o* in *trop,* nearly that of *o* in *nor;*" and "open, that of *ô* in *tôt,* nearly that of *o* in *over.*" Chesnier admits two, as in homme, autel; and Olivier two, as in mobile, cor; and in beau, dos. In this treatise o (formed from Q) will be used *provisionally* for the short sound, and O for the long one.

415. *The New England* or Yankee *o* in whŏle, cŏat, is a short sound with a wider aperture of jaw than *owe,* but not (perhaps) of lip. It has been casually heard, but not studied, and we refer it to the French *o* in *bonne.* Mr. Graham uses o for it.

O, English, in *bōne bŏat.*

416. *This well known sound is long* in moan, loan, owe, go, low, foe, coal, cone, bore, roar, bowl, soul; and *short* in over, obey, open, ŏpinion, onyx, ŏnerous, oak, ochre, rogue, oats, opium; and medial in going, showy. It does not occur in Italian.

417. O *is long in the German* ton, dom, hof, hoch, lob, tod, trog, mohn, lohn, moor, mond; *medial* in oder, also, vor, von, wo, ob, oheim; and *short* in wŏhìn, hŏfnung, ost, ofen, ober, koch, loch, zŏ-o-lōg. Hale, Ellis, Hart, Masquerier, &c., use O; Pitman and Graham ɔ with the tail on the right; Longley and Parkhurst a closed *ω*; and Comstock *ϱ, ω.* Kneeland uses ò as in *know, holy,* and o for its short quantity in *home, wholly*—having probably the New England vowel in view.

Ω, Italian "*o chiuso.*"

418. *For this sound* we will use *ω* provisionally—but preferring the closed form of Mr. Pitman. It occurs in cónca (cὼſca) a shell; ōndă, wave; bótte, a cask, (but bótte a blow is open;) no-ió-so vexatious. It is long in ancóra (ăſcὼră) yet, and short in áncora (áſcωra) anchor, Ottóbre (ωttώbrĕ) October. As the sound is an O approaching to U, it is probably the one which those have in view who assert that in some words, as *Roma,* the Italians place U. Mr. Ellis formerly used ϙ for it, but latterly a closed *ω.*

419. *As in dialects of Latin,* some wanted O and some U, one being used for the other, it is hardly possible that Latin O was *o aperto.* If known to Latin, it must have been *o chiuso,* but more probably the universal O.

V.

420. *Sjögren uses this character** for the most evanescent and obscure of all the vowels

* Ossetische Sprachlehre. 1844, p. 17—19.

he has to treat of; a vowel which seemed at times an evanescent *e*, or an *i*, or even a German *ö* or *ü*, or a Russian ы, or something between these.

ω?

421. *The same author* uses *ω* for a sound between O and U. He cites French *moi*, Swedish and Danish *sol*, and German *gross*, *noth*, *oben*, but these latter are English, as in gross, note, over. He has probably *o chiuso* in view. Castrén (p. 7, § 11,) mentions an open Ostjak *u* which approaches *o*, as in *ud* or *od*, the hand. We have heard such a sound in the Iroquoi word for *ten*—Ů˘JE˘LI˘; and it may occur in the Irish (of Munster) mə hù *my eye;* cùıdj *five.**

U in *pool;* U in *pull,* (ɯ, u, u, u.)

422. *These two vowels are distinct* in quality, and have the same variations in quantity. They are to each other as *awe* is to *odd*, and they require distinct characters. These, in the ordinary alphabet, may be u, u, with marks of quantity.

423. *In passing through the series* A, O, U, it will be found that U in *pool* is labial in its character, and that this labiality is preserved in shortening *foo˘l* to *foo˘lish*, whilst *full*, *fullish* have very little aid from the lips. We may represent *fool foolish* (often a medial,) by fūl, fūlıf.

424. *If we compare fool* with a word like *fuel*, *rule*, (avoiding the Belgian diphthong *iew*,) we detect in it (fyoo'l, rule,) a closer sound, which, when long, is confused with U, as in *fool*, *rule*, meaning by the latter neither ryule nor riwl, but *rool*, with a narrow aperture. This closer u is often preceded by *y* and *r*, as in *due* (=djU˘,) dew, stew, rūin, rūde, where it is rather medial than long.

425. *The Latin* u *is long* in woo, two, too, tour, poor, do, who, move, prove, groove, lose, soothe, boom, tomb, moon; and perhaps brew, crew, threw, true, if these are not the closer U lengthened. U is *medial* in boot, shoot, root, troop, (all of which Walker marks long, like move,) goose, loose, moos, droop, stoop, hoof, proof, tooth. U is *short* in good, wood, hook, which is not *who* with *k* added, as Walker would have it.

426. U is *short* in foot, full, pull, could, (and if the same aperture is preserved, these do not lengthen into *pool*, *coo'd*.) In the following, *y* precedes the short vowel,—acute, dispute, refute, refutation. U is *medial* in rude, truth, fruit, brute, and *long* in fume (fjU˘m,) amuse, refuse, bruise.

427. *The vowel of fool* occurs *long* in the Italian piu (pjū;) Sătūrnŏ, Mercūrio; tū, thou; in the German pfuhl, uhr, fuhr, buch, and *medial* in urtheil, nur. That of *foot* occurs

* We have heard an Irish vowel in loch *lake*, (sometimes luχ,) which seemed to lie between up and ope, but the *o* without labiality. We merely call attention to it here, and to Tschudi's work—Die kechua-Sprache, (Vienna, 1853,) which contains details of pronunciation, but which we have not now within reach.

short in Italian púnto, point; and in German nusz, nuts, muster, stumm, stunde. The French *ou* (in *pool*) is long in foule, and short in courrier.

428. *For the vowel pair of pool, pull*, Lepsius, Max Müller, Ellis, Rapp, Eichhoff, Bopp, Hale, Hart, &c., use u; Comstock, a character based on *u*, and ᴜ, (perverting u to up;) Pitman (formerly) and Graham ui, u; and Bishop Wilkins *u*.

429. *There are two objections* to ui, *ui*,—it ignores 'u' as made for a full open sound (note, § 359,) and it obscures writing and italics as in *mun* (moon) for *mun*. This use of *ui* in Russian, for English *sh*, is inconvenient, as in writing "*uiuuka*," a pine cone.

ʉ

430. *There is a middle series* of vowels between those of the throat and the lip side of the scale, and akin to both. Between the *o* of *obey* (as being closer than *owe*, and *e* of *ebb*,) we place the close French *eu* in eux, lieu. It is marked ö in § 369.

ᵾ

431. *The open sound of the preceding* is heard in the French oeū, beūrre, neŭf; of which some consider *de, me, le* the short quantity. Both this and the preceding are made with the jaw cavity large, and the lips pursed. Pantoléon writes but one French *eu*, making no difference for quality or quantity, in which he is not alone.

432. *German has an allied* or identic sound, long in schwören, schön, könig; and short in möchte, wörter, löschen. To the writer, there seems but one German ö, that of French *neuf*, with a tendency to the *e* side of the scale. *a*. But Lepsius refers könig to the closer of the two French sounds, and the word Gö-the to a position between this and the more open sound of French *beurre*. If this sound exists, there will be three allied characters wanting, ᵾ for beurre, (being an open character for an open aperture;) ʉ for Göthe; and ʉ for könig (a close character for a close aperture,) the letter to be unmutilated (ʉ) when the varieties are not discriminated.

433. *The first or most open* of these could be written on a *ɯ* basis, with the break of the left side towards the left. Dr. Lepsius writes the vowel of könig (o̱,) with the mark of length above, when long; that of Göthe (o̲, and of beurre (o̱) with a line of length when long, and if this sound were to occur nasal and accented, its letter, the doctor's notation, would be ɔ̃́.

434. *Rapp* writes the closer sound* ô as in peūr, leūr, seŭl, oĕil; and the open one ö, as in je, de, se, le; and ə (of English b*u*t, the article *a*, &c.,) in the French final of *noble*, &c., when pronounced in poetry. Thus for French 'redoutable' he writes *rödutáblə*.

* Physiolögie der Sprache, Vol. III., 1840, p. 108.

Y, y, ɣ, (ϒ, υ,) Gr.; Dan., Swed., Y.

435. *If there is any difference* between French *u* and German ü, it is that the latter has a tendency towards I. It is long in the French buse, vue, mûr (ripe,) and short in mur (a wall,) vu, une, fut. It is long in German übel, güte, natürlich; and short in glück, küche, küssen. We are unable to give an opinion whether the Danish and Swedish *y*, and Belgian *u* are exactly identic with the French sound.

436. *The historic character* is Y, often used in Greek typography. Max Müller uses ü; Lepsius the same, with the dots below; and Comstock ϒ.

ü̈

437. *Dr. Rapp uses this* character (4, 114,) for a vowel between ö and ü, occurring in the German of Elsess (Alsace,) and unknown to us.

u̯,?

438. *This letter is used* by Castrén (§ 11,) for a "close *u*" in Samojedic dialects.

ᵾ.

439. *Welsh u* (*y*,) long and short, a distinct vowel according to Ellis, and made "with the tongue between the teeth."

ɥ.

440. *The Swedish u* is pinched, and is between *o* and *it*. Castrén mentions it as an Ostjac sound. In the ordinary alphabet, ɥ is at hand for it, as in Islandic gɥ˘ɑ, God. *a*. Mr. Pitman has a reversed *u*, a tailed *w*, and several other forms of these letters, which could be distributed as required, among the vowels of §§ 437–40. See §§ 409–22.

441. *The following table* (§ 444) is compiled from Rapp (2, 119, 140, 150, 152, 171, 180;—3, 161, 223, 265, 308, 312;—4, 7, 111, 115, 118, 119, 127, 130, 134, 144,) and is in his notation, the circumflex indicating length and not quality; ê being the vowel of *they*, and ä of *there*. His key word for the fifth column is '*broad*,' which does not suit English, the vowel being *awe* and not *o;* but as it suits other vowels, it is not altered.

442. *This table shows the absurdity* of what is falsely called etymologic orthography, and the impossibility of giving the history of a word in any single spelling. It shows that a phonetic representation of the various phases constitutes the etymology and distinguishes the newer from the older forms, and that in using the present alphabet, LIF, and JIR, are the only proper representatives of *leaf* and *year;* and farther, it shows that the vowel of *vein* has no more right to an *a*-character than *o* or *i* have, for if the original A became E in Gothic, it equally became *awe* and *o* in other dialects.

443. *Eichhoff's table of mutation* (Parallèle des Langues, p. 91,) shows a similar result, the short Sanscrit A being represented by A, E, I, O, U, in Greek, Latin, Gothic, German, Lithuanian, Russian, and C^{k}eltic.

444. SCHEME OF INTERMUTATION.

	house,	good,	leaf,	year,	broad,	thief,	wide.
Original,	*û*	*ô*	*å*	*â*	*ä*	*ê*	*î*
Gothic,	"	"	"	*ê*	"	*iu*	"
Islandic,	"	"	*ou*	*å*	*ei*	"	"
Anglish,	"	"	*ea*	*ä*	*å*	*éo*	"
Friesian,	"	"	*å*	"	*ê*	*ia*	"
Old Saxon,	"	"	"	*â*	*ä*	*iu*	"
New Saxon,	"	"	*ô*	*å*	*ê*	*ê*	"
Old Suabian,	"	*uo*	*ou*	*â*	*ei*	*ie*	"
English,	*ou*	*û*	*î*	*î*	*ô*	*î*	*ei*
Danish,	*û*	*ô*	*ô*	*å*	*ê*	*û*	*î*
Swedish,	*ü̈*	*û*	"	*ô*	"	*jü̈*	"
Belgian,	*ö̈i*	"	*ô*	*â*	"	*î*	*ai*
Low Saxon,	*ɔu*	"	"	"	"	"	*ɔi*
Upper Saxon,	*au, ɔu*	"	"	*å*	"	"	*ai, ɔi*
Old Upper Ger.,	*û*	*uo*	*ou*	*â*	*ei*	*ie*	*î*
Old Lower Ger.,	"	*ô*	*ô*	"	*ê*	*ê*	"
German,	*au*	*û*	*au*	"	*ai*	*î*	*ai*
Alsace,	*ü̈*	*ü*	*eao*	*å*	"	*iɔ*	*î, ɔi*
Suabian,	*ɔu*	*uɔ*	*au*	"	*òi*	"	*ɔi*
id. dialect,	"	*û*	"	*â*	*ai*	*î*	"
W. Frankish,	*au*	"	*â*	*ô*	*ä*	"	*ai*
E. Frankish,	"	*ɔu*	"	*ɔu*	*â*	*ai*	"
Bavarian,	"	*uɔ*	*ä*	*å*	*òɔ*	*iɔ*	"
Swiss,	"	"	*â, au*	"	*â, ai*	"	*i, ɔi*

INDEPENDENT VOWELS.

445. *In using the blowpipe* to direct the flame of a lamp upon a small object, as in testing minerals, or in goldsmiths' work, a continuous blast is kept up by filling the cheeks with air, without interrupting the natural breathing through the nostrils; that is, the air may pass into the nostrils, and out of the lips, simultaneously. To effect this, the base of the tongue must close the back of the mouth in the *ng* position.

446. *With the back of the mouth closed* in this manner, or by a deeper closure, the air within the mouth is entirely cut off from that in the lungs; yet it may be compressed and forced out from behind a *p, t, cay,* position, or dilated by a sucking action behind a

d, t, tl, c, cl, position, and caused to produce a sound by the opening of the consonant contact, not with voice or breath, but by a resonance which some may consider an 'independent' aspiration.

447. *If an inverted aspirate sign* is prefixed for inspiration or suction, p,e will indicate a syllable drawn inwards. Let ǀ indicate independence from the lungs, of the vowel effect or resonance, before the character of which it is placed, when pǀ,e will indicate the sound made faintly by smokers when separating the lips under suction;—tǀ,e, one of the Hottentot clacks, the inverted accentual indicating force;—tǀ,l (or with *h*,) a sound made to start horses;—,h͂ a nasal trilled or vibrant inspiration, or *snore;*—pǀə (the air expelled,) a sound described to us, probably Dacota, for in Riggs' Dictionary, *p* (also t, k, c′=*tsh*,) with a dot below "has a click sound," whence the word for *elm* is probably pǀəe (or pǀ‘e, if the effect is deemed aspirate.)

448. *In the Nadàco* (an English name, An-a-dah-has of Schoolcraft,) a Texan language, we have heard such a sound following *t*, with an effect as loud as spitting, and somewhat resembling it, as in căbátǀo, (thread,) where the resonance is modified by an *o* cavity;—nʉ′stǀə, (paper;)—tǀə,á˘u˘h (tooth,) with final h, it may be considered a dissyllable;—há′vtǀo, (wind;)—qǀəàs (thigh,) a monosyllable, the vowel of medial length. There is an English click sometimes heard, indicative of impatience. It is a rapid repetition of tǀ,ə.*

CHAPTER XV.

THE CONSONANTS.

No condition is more necessary for the success of a projected system of orthography than that it should be as much as possible a necessary deduction from fixed principles, and as little as possible a matter of arbitrary invention. . . . Now, the arbitrary elements of a reformed orthography should be as few as possible; since, as long as they are arbitrary, they will vary with the peculiar views of the innovator—and as one innovator will rarely give up his own details for those of another, there is no means of insuring uniformity except by laying down preliminary common principles, and admitting some common principle of reasoning upon them.—*Prof. Latham*, Feb. 1849.

449. *The nature of the consonants* having been described in Chapter 8, it remains to give them in detail; and in adopting the Roman alphabet we may associate each sound with the character made for it, or indicate certain known sounds in the same manner that one without a letter would be indicated analogically. Premising that *ph, th,* cannot be used for simple sounds, because they must have their power in *uphold* and *pothook*, we may in-

* *Dh* is a sound peculiar to the Galla language—and extremely difficult to be acquired, the *d* being followed by a sort of hiatus, or guttural approaching to the Arabic *ain*.—*Ch. T. Beke*, Esq. Proceed. Philol. Soc. 1845, vol. 2, p. 89.

dicate an aspirate of G by ʻG, and of *cay* by Greek χ, causing a discrepancy which the use of ʻc (with the aspirate mark above) would obviate.

450. Sjögren uses an h formed by continuing the termination down and towards the left, nearly in the shape of o, and this o is added to aspirate any lenis phase. Thus, using the Russian alphabet, *Г* is *gay*, and the o mark added makes it a sonant aspirate;—added to *П* it forms *ph*, and to the stem of *Т*, *th*, but the last is not correct, because *t* and *th* (θ) belong to different contacts. The lower projection of *К* similarly curved gives χ. This mark forms part of the character, so that there is no economy of types, as there would be in using the Greek asper mark. *a. This and the allied marks*, when convenient to the printer, or when types are specially made, should be placed over the letter.

LABIAL CONSONANTS.

§ 451.

p ʻp (φ)	m̊	v̊	..	..	..	p̃, *surd.*
b ʻB (w ƈ)	m	v	v,	ʻv	ʻv,	B̃, *sonant.*
1 3		5	7			12
2 4		6	8	9	10	11	13

Of these, p, b, m, have their English power; ʻp is preferred to Greek φ (§119) except in script; and its sonant form ʻb to its proper letter (W, § 127) in the Roman alphabet, or to the Romanic ƈ with which (or with a *b* with the stem broken towards the left) it may be written. This ƈ is to have the centre open, as distinguished from true *β*, which might be used in the modern language instead of *μπ*. Böhtlingk assigns both f and φ to Ossetian, Grusinian, and Armenian. ʻB occurs in Ellenic ƈ (sometimes υ,) in Spanish *b* between vowels, and in German (W,) but some Germans use English *v* for it; German *v* and *f* being the same letter.

452. b̃, p̃, are for the labial trill—a rapid alternation between b ʻb, or p ʻp. The *flat* p, t, c, have been mentioned in §§ 181, 362–3.

453. *We cannot hesitate* (§ 43) to restore to Latin and Anglish V its proper power (§§ 106, 112, 143–4,) unless we doubt the ancient and modern identity* between QVALE &c., and Italian *quale*, (*quattro*, *quantità*;) QVANDO, AQVA, and Spanish *cuando*, *agua*, Italian *quando*, *acqua*; VIDUA and Anglish *vidva*, and the initial of *widow*.

454. *The Latin* 'V' *consonant* is in the predicament of English '*w*,' most scholars know the latter through its German power, and some of them cannot permit themselves to believe that it is almost a vowel. We consequently find English and German '*w*' confounded, (as in the alphabets of Matushik and S'uñic',) precisely as the English confound their '*v*'

* This identity is denied in the Roman Orthoepy of Prof. J. F. Richardson, who turns QVANDO into *cando*, and would reject the tables in § 223. His table of the consonants (p. 51,) is erroneous—he gives no authority for Z being *ds*— and he is silent in regard to *m* final and *n* adulterinum.

with Latin 'V;' although, in each case, there is ample material for determining their nature.

455. *In assigning 'V' to its proper power*, we are giving a great advantage to English over many other languages, where the sound has swerved into a sonant *f;* and in doing so we follow Eichhoff, who assigns the proper power to Latin 'V' and uses it for Sanscrit, as in Văst, Latin Vasto, Eng. > waste (=VEST) to destroy; Sanscrit Vĭd to discern; Latin Vĭdĕo to perceive; English *wit* and *e-vid-ent*, where *wit*, *-vid-* are false spellings, *wit* having the right sound and the wrong letter, whilst the variation of sound in *-vid-* has not been accompanied by a change in spelling, according to Dr. Latham's sixth rule—"That changes of speech be followed by corresponding changes of spelling."

456. *Latin* V *has a surd aspirate* in English *wh*, which is always followed by V *way*, as in *when* =v̊vɛn, which is not ᵒvɛn, as some suppose, nor is it *hwen*, as *hden* is not *then*. A character commencing with (ʿ) would be suitable for print; and for script, a *v* with a break towards the left, in the descending stem. Unfortunately, this sound is departing. We heard *wig* for *whig*, the first time in July, 1848, and not unfrequently since. When this confusion is established between when wen; where were; which witch; wet whet; whey way; wheel weal; the language will have ceased to be a refined one.* The sound probably belongs to Welsh, provincial Danish, and ancient Greek.

457. ᵒV *occurs* in several Vesperian languages, and the whistle which Duponceau attributes to the lɛnàpɛ (Delaware) language, is this sound, as in ᵒvtē (heart, ndē, my heart,) ᵒvtèhīm (strawberries,†) with flat t. In the Wyandot (vŏ́ndŏt,) salăc̆vu̯ (it burrows,) it occurs before a whispered vowel. Compare Penobscot nɛ̆cᵒvdɛ̆́s (six; ᵒvtàu·ăc (ear;) vtàuăgŏlᵒl (ears.)

458. V, *a nasal English w*, occurs in the Penobscot word for *seven*,—tɛ̆mbà,ᵓv,ɛ̆s. It is No. 1 of the Scheme, § 193. The labial coalescent (§ 451, No. 11,) is nasal in Wyandot, as in

nɛ́▸ɛtă▸ʿ	ăŭʻrvɛ,h,á,v,	tsĭ▸ĭgvă·có,t.
the pine	*all winter*	*is green.*

LABIO-DENTALS.

F, f; Ḛ, ɛ, (v,) English *v*.

459. *Sounds formed by the contact* of the lower lip and upper teeth, of which F is the

* "Not necessarily. . . . . In the south of England so few people say *when*, *whig*, that *this* is the harsh and unrefined, the provincial pronunciation. . . . . The sound *wh* is a dialectic pronunciation of *khw* in Welsh; and, indeed, it would appear that *wh* in English came from *khw* through *kw*."—*Ellis* MS. *note.*

† A heart-shaped fruit, but in Wyandot they are called stars, from their bright appearance among the foliage.

best known. The *v* of English, French, Spanish, &c., not being a Sanscrit, Greek, Latin, or normal German sound, it was not supplied with a character in the Latin alphabet. Being a cognate of F, we assign Ⅎ to it, of which the written form is *v* with a break towards the right, in the middle of the descending stem. The form may be seen at Rome on the tomb of Caius Poblicus Bibulus, in the abbreviation ·P Ⅎ·.

460. *The letter* ⅴ (and ⅴ, found in some printing offices,) is *not* recommended, because it is scarcely distinct enough, and it does not differ sufficiently from Latin V, whilst our pair associates well with p, b, &c. (§ 70,) and if English *v* has an affinity with Latin V *way*, as in VALEO, *v*alid, *w*ell; VULGUS, *πόλχος*, *v*ulgar, *f*olk, it has even more with *b* and *f*, (§ 267) as in pro*b*ate, proo*f*, prove; s-cri*b*e, s-cra*p*e, gra*v*e, gra*ft*, gra*ph*-ic; ro*b*, bereave, bere*ft*.

461. *Should labio-dental* p, b, m, *occur*, they can be formed out of these characters with the aid of the marks in §193. Most authors of ethnic or new alphabets use *v*, and many use *w* with their English power, the earlier ones having done so thoughtlessly, and the later ones to preserve uniformity—although uniformity from a false basis is not desirable. Mr. Ellis's recommendation of 'w' with its German power, and ɯ for English *w*, are the least objectionable—but he uses *v* with its English power.

462. *There is no certainty* in the accounts we have of English *v* and German *w* occurring in exotic languages, for when either is mentioned, we have no proof that the observer knew the difference. For example, although the modern Greeks asserted in the most unqualified manner the identity of their β with English *v*, they were in error, and it has been but a few years since this question was settled. In a similar manner, the Spanish grammarians are still mystified about their *b* and *v*.

463. *The sonant labial trill* is used in Germany to stop horses, and we have known a child who emphasised the word *push* by trilling the *p* when desirous of being pushed to the table after having climbed into his chair.

LINGUI-DENTALS.

Ⅎ, ʔ, (*θ*, *ϑ*,) in *th*in. Ⅾ, in *th*en.

464. *These sounds are produced* by placing the point of the tongue between the teeth, and they are aspirate in their nature. *θ*, *θ*, *ϑ*, is the Greek character for the surd phase, and *Δ*, *δ*, the *modern* Greek sonant. They occur in Albanian, as in ɑɛm (a tooth;) ʔɛm (I will say—exactly English *thum*';) mɛʔon (to say,) mɛʔ͡ðon in some dialects; mɛ- being the infinitive sign, as in mɛbó, (to make,) mɛrcúɛ (to go,) mɛdártũnɛ (to love,) dartùɛr, (lover.) Should a liquid occur, it will be a kind of *l* (ɹ.)

465. *They cannot be represented* by 'ţ, 'ḍ, because they are not formed on a *t* basis.

§56. 't means an aspirate made at the *t* point, behind the teeth, and indicates a sound between *th* and *s*.

466. *Throughout this essay* the lips are supposed to be towards the *left*, and the throat towards the *right*. The characters ɪ, ᴅ, (ᴊ,) therefore, are supposed to be turned towards the lips.

467. The surd sound is attributed to Spanish *z*, and to *c* before *i*, *e*; and the sonant to *d* between vowels, as in *saludado;* but the sounds are not quite those of Greek and English. The Anglish and old Nordish character for the surd sound is ᵽ and for the sonant ᵹ, both of which are freely used in illustration by the German philologists, as Grimm and Rapp. *a.* T, D, *if made between the teeth*, would be 'ɪ ('θ,) 'ɑ deprived of aspiration.

468. *The fourth Arabic letter* has the power of ϑ (Volney, Ellis, S'uñic',) and the ninth that of ɑ, both as heard by us, but they are changed in different dialects; and in Algerian they are confounded with *t, d* (Paulmier.) Volney's notation is respectively *θ* and a kind of ʒ; Richardson uses s̩, ż; S'uñic', ṯ, ḏ; Max Müller, th, dh; Lepsius, *θ*, *θ'*; Ellis, a pair of peculiar characters; Comstock, ϑ, ȸ; Pitman and Graham, a well-formed pair, based upon t, d, with which they harmonise, and which should be adopted. We prefer ϑ to *θ*, as a script form. Our characters are adapted to the common alphabet, and the Greek furnishes ϑ.

469. DENTALS.

t	-	t̃	-	-	-	n̂	-	*surd.*
d	l	l̂	l,	l·	n	n̂	l̩	*sonant.*
1		4				9		
2	3	5	6	7	8	10	11	

469*a*. T, D, L, N, *are formed* by a light contact of the tip of the tongue at or near the base of the upper teeth. The Spanish *t, d*, are said to differ in quality by having the tongue laid against the upper teeth, thus removing the contact towards the lips.

470. T, D, *have no aspirate* forms, (unless *s*, *z* are so considered,) but we can force breath past the *t* position, and thus form ('ϑ) a kind of *s* or ϑ, just as we can deprive *s* of aspiration and make it ('*s*) a kind of posterior *t*.

471. *Marks are required* for consonants made nearer the lips and throat, and to be placed below or (less properly) after the letter. Let the Hebrew point (ɪ) represent the normal position of a consonant, then (,) the horizontal line directed towards the lips, or (ʳ) throat, will mark the distinction when required. §466.

472. The *t, d*, in *tsh, dzh*, are thus drawn back by the following palatal, and in fact,

they may be considered the lenis forms of *s, z;* and *if they are such*, then t·ſ for *tsh* is less philosophic than 'sr, which, however, interferes with our ordinary habits of notation.

473. *Those who would write this tsh* with one character, have not provided for cases where the *t* may be adapted to the *sh* of another word (Rule 4, §59,) as in—a*t sh*ore; or where an antecedent *t, d*, may keep the *t* of *tsh* from sliding back, as in—tha*t ch*ild,—ba*d ch*oice, or the reversal of *tsh* in hu*sh't*, wa*tch't*, whatever this final *t* may be.

474. L̆ *is the surd Welsh aspirate* 'll,' which we think occurs sonant in Irish, where it is considered to be a kind of *d*. We have heard the Welsh *ll* in Creek, Choctaw, and Cherokee.

475. *The following are examples* from the musical Creek (an English name,) more correctly—măscòcı (*c* as *k*,) in which the name of the "large river," Withlacoochee, and "figured rock river" Chattahoochee, are respectively—

ʊ˘j˝llăcʊ′tsı, tsʊ˘tʊ˘hʊ′tsı˘;

the former from ʊ′jvă (water,) and l̆̆lăcĭ (large,). l̆̆lăcımáhĭ (larger,) l̆̆lăcı′ă (largest.) All the vowels are short, and dotted j is the guttural coalescent.

476. *We are doubtful* whether the French *l, r*, of *simple, maitre*, are whispered (s ɻ p˝l, m ʂ t r̆˝,) or surd aspirate, but we incline to the former. Most French orthoepists do not mention this phase.

477. *Castrén uses* an 'l' character with the appendage of 'r' for an intermediate sound in Samojedic, which has more of the (smooth?) *r* than *l*, although both are heard simultaneously. In the absence of the proper type, it may be represented by a mutilated 'h,' as in fe're (half.)

478. *The Polish l* is indicated by 'l' with a line through it in the direction of the acute accentual. We judge that it belongs to the Arabic linguals, and mark it (l̩) with a descending semicircle, cut from a comma point, or from an inverted (˳) degree mark.

479. *There is in Sanscrit* a kind of *l* which is regarded as a (long and short) vowel, and if we touch the palate lightly and try to pronounce A, there is so little interruption that the sound seems a vowel until the removal of the tongue (the vocality continuing) exhibits the *l* quality.

480. *The* L *is less interrupted* with open vowels, as in Latin āla (a wing,) than with close ones, as in *eely*, and the two can be discriminated when detached. The Sanscrit sound may have been still less interrupted, as if we were to pronounce *ell* without bringing the tongue in contact.

481. *Eichhoff figures* the Sanscrit letter by 𝐿 (with a similarly formed R, also used in astronomic typography for *right ascension*,) but with the small letters he follows Bopp in placing *a dot below*. Ellis uses 'l, and Lepsius *l* with a circle below, which we adopt.

482. *Max Müller refers this Sanscrit* vowel *'l* to *l* in *friendly* (and Eichhoff says the *'r* is common in English, meaning probably the smooth *r* in *far*.) But the *-ly* in *friendly* is the *li-* of *live* (transposed in *ill*,) it is the *-ley* of *medley*, and if this word is pronounced with the final vowel suppressed, no ear can distinguish the then final *l* from that of meddle (=mɛdl,) or the *l* in *bulb* from that of the transposed *bubl*, the difference between *medley* and medl̈y being in the diaeresised vowel, (§ 169.) And the question may be asked—If the four English sonants 'mɛdl' do not spell *meddle*, what *do* they spell?

483. *N̊ surd afflate* (§ 195, 469⁹,) we have heard in Cherokee (§ 624¹⁰,) and a forcible sonant form (§ 469¹⁰,) in Albanian, as in the word hũñ (*nose*), of which it may be a metathesis.

INDISTINCTNESS.

484. *A dot below a letter* should not be used for any important phase of speech, for as the least mark, it should indicate the slightest sound, whether vowel or consonant. The Abbé Proyart, in his History of Loango, 1776, says of the language—"There are many words which begin with *m*, *n*, as in mFouka, nGoio, but these letters are pronounced so slightly, that they who are strangers to the language would pronounce after them Fouka, Goio." "Some Dakotas, in some instances, introduce a slight *b* sound before *m*, and also a *d* sound before *n*." (These are examples of eduction.) "The letter *n* is hardly heard, and often not at all in the pronunciation of *manji*, [Fr. *j*,] in all the words that begin with it."—*Baraga*, Otchipwe Dictionary, p. 216.

485. *We have heard* this *n* in Wyandot, (= vɔ́ndɔ̆t,) where the speaker denied its existence, and would not have written it, had the language been a written one. It occurs in nḍɔ̀cc (ndɔχc, four,) and in the name of the town sca·nḍáhtɛ̆tt̀ (beyond the pines,) Skenectady in New York—spelt *schenectady*, the *sch* being due to the Dutch. The *h* is the ordinary one, and a slight aspirate closes the word. The accent and the last three vowels are traditionally correct, to remain so until some phonetician fancies that the third syllable should have the vowel of *fut*, as *malady* is supposed to have the vowel of the first syllable repeated in the second.

486. A slight *n* (not *ng*) occurs before *gay* in the Wyandot—

ūnǧĭtá ▸ ĭhɛ'r da·nJ,o,'J,é ▸'.
³ *nuts* ² *he-eats* ¹ *the-bear.*

nJ,o,'J,é ▸' *bear;* (in Cherokee, ɔnnɛ,'.) Here medial quantity is marked with (·). The *r* is smooth, and ▸ (§ 568) is the Arabic *hamza*.

ARABIC LINGUALS.

487. *Of the Arabic linguals* Lepsius says—"In their formation, the breadth of the tongue

either touches or approaches the whole anterior space of the hard palate as far as the teeth, its *tip being turned below.*" We have heard and pronounced these sounds casually, but *not* with the tip of the tongue turned down. Ellis (Essentials, p. 54,) says—"The tip of the tongue being brought *against the back of the upper gums* tightly, forms ṭ, and loosely, forms ḍ."* Here we think that the only difference between the *t* and *d* is the sonancy of the latter.

488. *The Arabic letters* of this phase are the following, to which we add our marks for lenis and aspirate, sonant and surd. Paulmier's is Algerian, and Volney's characters are cut with peculiar hooks, on the basis here indicated.

Smith & Robinson,	ṯ	ṡ	ḏ	ẓ
Lepsius,	ṯ	s̲	ḏ	z̲
Ellis,	T	ſ	D	ȝ
Max Müller,	T	Z	Ẓ	Ṯ
Paulmier,	t′	s′	d′	z′
Volney,	t	d	s	8
Richardson,	ṯ	ϑ	z̤	z̈
S^uñic´,	't	's	'd	ż

489. *All the Arabic forms* (as ⊥, *t*,) have in common a (,) vertical curve on the right, which we propose as being suggestive, and as more appropriate than the dot. Lepsius (Alphabet, p. 46,) adds a (theoretic?) *n* to the series, and we are inclined to place the Polish barred *l* here. (§ 478.) This would give the series—

t, s, d, z, n, l,.

490. *The Polish* s´, (and z´) although described as a mouillé *s*, (z,) is perhaps near the 's,ad.' Vater (Gramm. Poln. 1807,) describes the Polish sound as between (German) *sej* and *esch;* and Bishop Pigneaux uses *x* for a sound between *s* and *sh*.† We have heard such a one in the Waco (= Vèco) of Texas which we will mark provisionally with ɔ, (or if sonant—ɒ) as in ɯcvètɔ (five,) a word derived from that for *hand*, as in Lɛnàpɛ and Hebrew. We attribute the same sound to the Chinese of Canton (cvɔ˥tɔ̌˩,) where the word for *ten* is ɔɛp˥.

* "The sound differs very slightly if at all in the two pronunciations. The tongue is certainly not contracted and hard, when the tip is brought forward, but wide and soft. . . . The Polish *l* is to lingual *t*, as *l* is to *t*."—*Ellis MS. note.*

† "Ita litteræ *x* etsi sola indicat unam consonantem cujus sonus medium tenet inter litteras *s* et *ch* Gallorum et xa, xê, etc. proferunter modo dulciori quam apud Gallos et etiam modo molliori quam *sc* apud Italos."—Dict. Anamitico-Latinum. Serampore, 1838.

SANSCRIT CEREBRALS.

491. *These are thus described* by Wilkins (Gramm. 1808,)—"This series of consonants is produced by turning and applying the tip of the tongue far back against the palate; producing a hollow sound, as if proceeding from the head." Lepsius and Ellis add the common Sanscrit *r* of other authors. Wilkins says that in Bengal the *d* is "pronounced like a very obtuse *r*." See §199. We will assume that the Sanscrit *r* is a common trilled *r*, and that the Bengali sound is a trilled cerebral (not *d* but) *r*, and to be so written. Eichhoff (p. 80) excludes the *l* as fictitious; Wilkins makes it the Welsh *ll*. Eichhoff uses his dotted L for a Birman sound, which others consider Polish *l*.

492.	Lepsius,	ṭ	ḍ	ṇ	ṣ	ẓ	ṛ	ḷ	ṭ͡	ḍ͡
	Ellis,	tc	dc	nc	ſc	ȝc	rc	lc	tcH	dcH
	Müller,	*t*	*d*	*n*	sh		r	*l*	*th*	*dh*
	Bopp,	ṭ	ḍ	ṇ	ʿs		ṛ		ṭ͡	ḍ͡
	Eichhoff,	Ṭ	Ḍ	Ṇ	Ṣ		R	Ḷ	ṬH	ḌH

493. *Most of the Sanscrit forms* have a horizontal curve below (‿) by which we propose to denote them, placing it below or after the base letter, as in—

t‿ d‿ n‿ s‿ t‿h d‿h

494. *Another mode* is to use the small italic capitals, ᴛ, ᴅ, ɴ, ꜱ, &c.,—and Bengali ʀ, which would represent the point of contact as removed towards the throat. §471. In Ellis's notation, 'c' is a diacrit, 'k' being used for the *cay* power.

SIGMALS.

ϛ, ϡ, ɾ, ɾ̇, ɾ̲, ɾ̆, ɾ̋, ɾ, ɾ, ɾ꞉

1 2 3 4 5 6 7 8 9 10

495. The affinity of the aspirates of *seize* is rather with the dentals than the palatals, with which (§158) they are often classed. Most authors represent them by *s*, *z*, the latter being a perversion to which we are exceedingly averse. Bopp uses *ζ* for English *dz*, which is also wrong. Although we do not approve of *any* double letters, *z* may be wanted for Russian *zd*, a power which is constantly before us in Greek, and perhaps in Hebrew. (*Ewald.*) Compare ὄζος and Aeolic ὄσδος; Hormuz and Hormuzd; Oromazes or Oromasdes; Ezra-s or Esdra-s. The use of English *z* would tend to destroy the etymologic value of every word (like 'ozone') transliterated with it from Greek, whilst a new character would indicate a new sound ('ozon') in a corrupted or naturalised form. This objection would be weakened if Greek z were transliterated with *zd*, but we fear that very few would use forms like *ozdon*, or *horizdon*.

496. The English or French *z* is unrecognised in Greek, Latin, and Spanish, and it

therefore requires a new or modified letter. We at first employed *s* ending in a comma point to simulate c, g, but this degenerated into a character like the Russian form (з) which we adopt, using the numeral 3 until the proper type (a reversed ɛ,) is cut.

497. *The character* 'z' is hardly known as the sonant of *s* (out of which it has mostly arisen,) except in some of the Slavonic languages, and it is not recognised as the proper character in French, English, Italian, or German. In the two latter it is always expressed by *s*, and in the two former, in the great majority of cases, as in rose, misery, positive. Even in common English, it is disliked, *s* being preferred in words like analyse, criticise, &c., and were it introduced, it would falsify etymology throughout, not excepting words like *zeal* and *horizon*.

498. *Lepsius rejects the Romanic Cay* on account of his third rule, which virtually rejects pronounced and etymologic Latin, and tends to render the barbarisms in it permanent. Yet, if he rejects Cay on account of its many powers, it had at least its *correct* power in several important living languages, whilst z has its correct power in no modern language, and its perversions are quite numerous. *a.* Its powers are, 1. Ancient Greek, as English *zd;* 2. Italian *dz* (and *ts;*) 3. German *ts;* 4. English in *azure;* 5. as *s* in Hungarian and Danish; 6. French; 7. Spanish; 8. Middle high German; 9. Scotch, as in *Dalzel* or *Dalyel,* where it is derived from g through the Anglish ȝ.

499. *Bopp uses* ș (§484,) for French, Polish, and English *z*, for which 's' and our surd mark might be used, but the space above may be wanted for marks of quantity. Most authors use *z* for it.

500. *The Greek and Latin* R was trilled, as described by the ancients, and this accords with European practice. The letter 'r' therefore means this sound—however convenient the addition of a sign of trill (˜) might be found. Rule 5, §63. *We have heard* trilled *r* in Albanian, Armenian (in part,) Arabic, Chaldee, Ellenic, Illyrian, Wallachian, Hungarian, Russian, Catalonian, Turkish (in part,) Islandic, Hindustanee, Bengalee, Tamil, and other languages, in the pronunciation of natives.

501. *The trilled r* is assigned to English as an initial, although many people with an English vernacular cannot pronounce it. Dr. James Rush would have the trill reduced in English to a single tap of the tongue against the palate. This we indicate by ṙ, with a dot above.

501*a*. *The Spanish* (South American) *r* in pɛrro (dog) as distinguished from the common trilled *r* of pēro (but,) seems to be untrilled, and to have the tongue pressed flatly, somewhat as in English *z*, and doubled, as in *more-rest.* It may have arisen from an attempt to yotacise *r*. We mark it *r̲* (or if trilled, r,) with a line below, in case it is distinct from the next. §502.

502. *Armenian and Turkish* have a smooth (i. e., an untrilled) tactual *r*, much like the Spanish *rr*, if not the same, and with that, requiring farther investigation and comparison. Our impression is, that this oriental *r* may belong to the series of the Arabic linguals, in which case its letter would be r,, as in Turkish (with Latin letters) jir,mí (twenty-one,) whilst Turkish ʟermeo (to give) has the ordinary or trilled *r*.

503. *English smooth r*, in curry, acre (a-cr,) begr, grey, curt, is formed by much less contact than the European and Asiatic *r* requires. It is the true liquid of the *s* contact, and allied to the vowel (ə) in *up*, a character to be formed provisionally from italic *x*. Ellis writes it ɹ.

504. *The Sanscrit vowel r*, long and short,—written by Lepsius with *r* and a circle below, and 'r by Ellis, should probably be figured on this basis.

505. *A more open, smooth* r, is found in cur, fur, far, more, which may be marked in Ellis's mode, with an r having the stem continued down to the length of 'l;'—or with (r) Anglish *s*. We use the latter in our examples.

506. *Mr. Ellis regards* 'fur' as *f* and this open *r*, without a vowel between, and Kneeland had a character for *ur*. We regard *fur* as having the *open* vowel ʊ (with which the consonant is allied,) *short*, the quantity being confined to the consonant (*fur*=fʊ˘r˘,) and the tongue moving from the vowel to the consonant position.

507. *The same open consonant* occurs in arm, worm, turn, ore; and although, for a particular purpose we have cited *arm* as long (§ 93,) it contains a short vowel (a˘r˘m) and long or medial consonant.

508. *If we write* 'rn for *urn*, and f'r, or fʀ, for *fur*, we certainly cannot represent *far*, *four*, in the same manner. Moreover, we may dissyllabise pr-ay on a trilled or a close *r*, and monosyllabise it p'ray with the most open.

509. *At one time* the discussion of the English letters led to a curious result. When the *difference* between the open *r* of *tàrry* (from *tar*) and the close one of the verb *tárry*, was ascertained, an *identity* of vowel and of consonant was represented,—a greater error than to spell *more* and *moor*, *fairy* and *ferry* alike, or *pres-d* for *prest*.

510. *The Welsh surd aspirate* rh (ʳ) may be the smooth element. We do not remember its character upon this point. The French -tre, -pre, is trilled, and perhaps rather whispered than aspirate.

511. *The Polish rz*, Bohemian r˙, is a trilled (and as we believe) aspirate *r* (sonant and surd) made simultaneously with *zh* (ʒ) or *sh* (ɾ.) See Ellis, Essentials, p. 50. One hypothesis has been given in § 200, another presents itself in the probability that it has arisen from an attempt to yotacise *r*, yotacism being common in the Slavonic languages. § 519.

512. *Lepsius represents* Polish rz by *r̆*, Ellis by 'ȷ' with the appendage or projection of 'r' an excellent character, to which the surd mark (˚) might be added when necessary. We propose, for ordinary type °r,, ˚r, for sonant and surd, to the latter of which we think Mr. Ellis's key word przez (= p˚r,e s ,) belongs, owing to the influence of the surd *p*. If there is no aspiration, its mark must be suppress.

513. *There is no guttural r*, all the foregoing being made strictly in the anterior part of the mouth. But in dialectic German and French trilled *r* is replaced (by otosis) with a vibrant guttural, which is as far from *r* as German *ch* is from *s*.

PALATALS.

ŕ, in potion. ǰ, in nat*y*ur. tŕ, in *etch*.
ȷ, in brazier. ȝ, in sold*i*er. dȷ, in *edge*.

514. *Every consideration*, philosophic and practic, requires that English *sh* (ŕ) and French *j* (ȷ) should have distinct characters, and that these sounds should *not* be considered as having an aspirate or other affinity with *s*, *z*. § 58. Our characters are as distinct as 'b, d,' and they have not been chosen that they may recall Latin S, J. Moreover, were it necessary to use a pointed '*s*' either for ŕ or ϑ, we would prefer it for the latter, as less likely to outrage affinities. The character 'ſ' was proposed by Volney in 1818, 'ȷ' by Ellis in 1856, and both were used by us in 1846.*

515. *The following are some of the forms* which have been proposed for ŕ, ȷ.

Bopp	s̈	ż	Ellis	ſ	ȷ
Lepsius	s̆	ž	Longley	"	ȝ
S'uñic'	s'	z'	Parkhurst	"	"
Riggs	s´	z´	Pitman 1844	ŕ	ȷ
Max Muller	ś	ź	" 1856	c	j
Rapp	*sh*	*ſh*	Graham	"	"
Eichhoff 1836	ç	ȷ	Matushik	†	†
Hale 1846	ç	*j*	Masquerier	ˢ	ȷ
Comstock 1846	c	j	Pickering	sh	zh

516. *Among the worst of these* and other forms, are those which were intended to recall the erroneous English notation, or to convey the impression, that ſ has some aspirate relation to s, § 58. Still worse is the desecration of Latin Cay.

517. *The Sanscrit* श, according to Wilkins, "is produced by applying the tip of the tongue to the fore part of the palate, and passing the voice as in pronouncing our *s*."

* Proceedings of the American Philosophical Society, Vol. 4, p. 268.
† An S facing the left, and a Z facing the right.

Eichhoff, who took his pronunciation from the mouth of Rammohun Roy, makes it French *ch*, Eng. *sh*, and Max Müller does the same. Bopp makes it different, he marks it ṣ, the English *sh* sound being assigned to the fourth cerebral of § 491. Lepsius (Alphabet p. 42,) and Ellis, thinks it χ. By the description of Wilkins, it may be a sound between s and ʃ, or a flat s, or one formed a little posterior to the ordinary point of contact. We have been accustomed to use ʃ for it, but as this is unsatisfactory for a doubtful sound. Eichhoff's character ç may be used. χ must have occurred in the antecedents of Sanscrit, although it seems foreign to the genius of Sanscrit itself.

518. *The liquids of the palatal contact* are a kind of J (*yea*) made at the palatal point, and as Eng. *w*, *v*, and *r*, *z*, are permutable, so ȷ falls into ȷ, and its surd aspirate into ʃ.

519. *Hence the word soldier* (=soldȷr, or soldȷəɾ,) is apt to fall into soldȷɾ; and *nature* (=net-ʷȷɾ, netʷȷȷɾ, or netȷɾ,) into netʃɾ, or netʃəɾ.

520. *Jotacism* (*yotacism*) is the forming of J or some other allied sound *simultaneously* with a continuous consonant made with the outer part of the tongue, as *s*, *r*, *l*. Let the back part of the tongue be held in contact near the J (*yea*) point, and the apex upon *l*, in forming *li* in *million*, when the effect will be mɯlʲȷən, as the French *fille* is filȷ, or filʲȷ, or (eliding *l*,) fiʷȷ.

521. ʃ, ȷ, *must be yotacised* with the true ɪ (*yea*,) because an attempt to do so on the ȷ basis, would produce a sound between mute and liquid, like the fusion of English *r*, *z*.

522. *There is probably no true yotacism* (§ 519) after labials (p, b, m,) and gutturals (cay, gay,) or abrupts, for how are pj, gj, (or pȷ, gȷ,) tj, tȷ, to be sounded except in succession? The simultaneous effect, like that cited in *million* (properly mɯljən,) is therefore cut off in the Russian pjɛtʷȷ (five, whilst in sʲȷɛm (seven) it is apparent, with a surd liquid preceding the sonant which meets the vowel.

523. *The palatal liquid* seems to be present in the French *gn*, Spanish ñ, as in cigogne (=siGonȷ,) *niño* (=ninȷo.)

524. *Castrén's notation* of real or supposed yotacism requires numerous types, as he passes a curved line (‿) through the stem of the affected elements, as l, r, n, (the right side,) t, d, s, z, c, (ts.) A small palatal or guttural 'J' (as the case may require,) would be more economical, and might be understood to be surd after surds. Mr. Ellis uses ȷ, a character made by removing the dots of j.

525. GUTTURALS.

[1] c, in *car*.	[2] ć, *buch*.	[3] ç, *ich*.	[4] χ̃, Swiss vibrant.
[5] ɢ, in *get*.	[6] ǵ, betro*gen*.	[7] ɣ, (γ̇) kön*ige*	[8] γ̃, Ellenic id.
[9] ʃ (ɢ.) sin*g*.	[10] ȷ, *you*.	[11] ʃ̈, h*ue*.	[12] ɪ̨, nasal, § 547.

526. *We adopt* c, ɢ, *instead of* k, g, proposing that a small (lower case) letter be made for ɢ on the model of c. Mr. A. D. Sproat says—"The forms of the Roman and Italian letters (g excepted) are beautiful."* In fact, g is an ugly perversion in which the intended affinity between c, ɢ, is destroyed. The dot of g is that of c, the circle is its body, and its tail is the distinguishing carvilium or mark of sonancy. The French have a lower case form modelled on (*oȷ*,) the written form, which associates it with its congener, normal ȷ j. g itself should be curtailed (ɡ) so as not to project below the line.

527. *We adopt Cay Gay* as cognates in power and form, in the chief languages written in the Roman, as distinguished from the Greek alphabet. K is a foreign letter in Italian, Spanish, and French, where *q* is acknowledged—itself preferable to *k*, but *q* is required in its oriental sense.

528. *The use of k would tend* to force it upon Latin, and although this has been done by Rask and Rapp, it is a dangerous course—but a course which shows the necessity of giving Cay its proper power in all cases.

529. *It is true* that 'C' is an S in Greek, but deceptively, the Greek and Russian C being a form of *Σ*, S, whilst Cay is a form of *Γ* which in some cases had a semicircular form in Greek. See Franz, p. 25. Similarly, *x* in *beaux* is a form, not of Latin *x*, but of *s*, as French, Spanish, and English *y* is a form, not of Greek and Danish *y*, but of Latin ij, as is shown in the older typography of Latin, where they are often printed from a single type.

530. *Cay cannot be ignored*, (§43–5,) because it will be always present in etymologic Latin, in Anglish, Welsh, and Irish, Spanish, French, Italian, and old English. Probably every school, and the great majority of reading families, will have an etymologic dictionary, and scholars acquainted with the Latin alphabet, may be inclined to represent the pair, *cay, gay*, with the proper letters in exotic languages, where the natives cannot be prejudiced.

531. *If kah is used*, its stem should be shortened, as in Kneeland's character, and as one of its inscriptive forms is ⸗, this might even be adopted, such a double character being less objectionable than an entire k. The Punic *cay* is C with a vertical line through it, as in *ϕ*. The Albanian k is a semicircle (ҁ).

532. *The greatest concession* that could be allowed to *kah*, would be a character made of *k* with the vertical line removed, leaving *c* with a break towards the left, which would be useful in distinguishing script *c* from *e*. But even this would be dangerous, because the

* An Endeavour towards a Universal Alphabet, p. 10. It appears from a notice in the Am. Jour. Sci., 1840, Vol. XXXIX. p. 197, that this author addressed a letter to Prof. Silliman on the subject of his alphabet, dated Feb. 22, 1834, (§ 30, 79.) It is noticed in the Phon. Jour., Feb. 20, 1855.

rejected *c* would then be at the mercy of every one who might want a new character; so that whilst *c*, *e* would be too much alike with *c* as *cay*, the case would be different with a perverted power. Moreover, *u* and *n* are more alike than *c* and *e*, *v* and *r*, and various examples we have taken from native sources, are worthless on this account.

533. *The Gothic hemi-greek alphabet* has *k*, with which the Germans barbarised their alphabet, especially in the use of the hĭbrid *ck*, but *ck* and *ch* are concessions to the true *cay*, and the use of *k* has not caused *kk* and *kh* to replace *ck* and *ch*. An Englishman will spell 'sceptic' rather than 'skeptic;' an Italian prefers 'chi,' and the Spaniard 'qui' to *ki*, whilst any one desirous of uniformity, who acknowledges 'ca' to be correct, will not object to *ce*, *ci*, if he is provided with the means of spelling tre, tri.

534. *The use of kah for cay* is to be deprecated in a highly latinised language like English. It is equivalent to granting that when words change, the spelling should not change (§455,) but that a new character must be placed in the unchanged words; letting *t* in the French 'nation' have the power of *s*, using *s* for *z*, as in *rose*, and going to Greek for a new *τ* with which to spell words like 'naτif.' This mode is always wrong—that which does not interfere with forms which retain their historic value, is believed to be always right, no matter how long the time during which it has been neglected or broken.*

535. *In old high German* and middle high German, Cay and Kah were both used, and cay quite extensively, so that if the Germans were to re-adopt it, it would be a restoration rather than a novelty.

536. *Etymologic relations.* (§135.) CÆSAR, Ohg. caesar, keisar, cheisar. CASEUS, Ohg. kas, case, chase, Ang. cese, Eng. cheese. CROC-IO, to croak, Ang. circ, Eng. kirk, church.

*Mr. Ellis puts a note here to the effect that English *k*, *y*, *z*, will prevail. "As I deny the effect of *k* for *c* in altering the relations—merely altering them to the eye, not the ear—the argument does not touch me. To mark the connection between English and Latin by the eye *only*, I consider false." This remark is just, and we admit that like letters should represent similar sounds. "If we know *c*=*k*," [and we know and have it as well for English as for Latin] "this is enough, we may then change the Latin; writing (in palaeotype) kaizar? kaisar, keesar, *cæsar;* kaaseus, *caseus;* krookioo, *crocio;* . . . Ang. keeze, *cese*, Eng. tshiiz, *cheese*, &c., where the real comparison is between the phonetic words, and the original spelling (and meaning) is merely added as a means of identification. We must thus alter Sanscrit, Greek, Hebrew,—why not Latin too? I doubt whether we shall ever get people to agree on a pronunciation of Latin, even by introducing such an alphabet as yours. Let us introduce the best we can get people to accept, even though we pay the price of letting Latin be like the rest, a language to be transliterated."

To this we reply, that in transliterating Sanscrit, we do not falsify a single Sanscrit letter, whilst in thus meddling with Latin, the falsifications cannot even have the collateral merits of uniformity and stability—even if we do not take truth to the original into account. No one can yet predict the degree of perfection which people will or may be prepared to accept, but the fact is constantly before us, that the nation which has advanced farthest in civilization, has adopted a metric system in no way connected with the systems already in use, systems which every other nation would probably have determined to be too firmly associated with political organisation and domestic life, to render a reform desirable or possible. Farther, an alphabet displeasing to a Europèan heterotypist, may meet with favor when examined by Cherokees or Chippeways.

Ang. cing, Irish, ceann, Welsh, cûn, Eng. king. CANCER, Ohg. cancur, Eng. canker. CARCER, Ger. kerker, Ohg. carcare, karkari, (prison.) CITHARA, Ohg. citara, Eng. guitar. GENU, Ohg. cneo, chniu, kniu, Ang. cneov, Eng. knee. COQVUS, Ohg. koch, coch, choc; Ang. coc, Eng. cook,=cUc, kU k, kUk.

537. *We rather prefer* G, for the nasal of *sing*, because it tells what the phase is, and we are averse to associating the sound with an n-character, which would be paralleled by representing *d* with a *g* character. It is the English and German *ng* in *sing*,* *finger*,= Eng. fiG,GT, Ger. fiG,r, (§20–22.) It is common in Greek and Latin, rare in Italian, and unknown to Russian and normal French; but we have heard it in the Provensal dialect at Marseilles, in Savoy, and in the Bearnais of Pau. It occurs in Spanish, Catalonian, Armenian, and in the Tonga group.

538. *Pitman, Ellis*, &c., use ᵾ, ᵽ, and Comstock, ŋ, which have the advantage of being like 'ɹ,' the representative of the allied liquid. Others use the same small letter with the end turned towards the right, which is less convenient in print. *We recommend Mr. Pitman's form*, because it may be introduced into Latin (like J for I,) which we dare not do with G. Böhtlingk and Sjögren use H (a nasalised Russian N,) which is wrong in theory. In the less modern alphabets, *ng* is used. Eichhoff uses $\tilde{\text{N}}$; Marsden, *ng* circumflexed; Lepsius, *n* with a dot above, and Max Müller, a capital N. We use *ſ* temporarily, because it is accessible in Greek typography.

2. ġ 3. ɢ 4. $\tilde{\chi}$, *surd.* §525.
6. G 7. ʛ 8. $\tilde{\gamma}$, *sonant.*

539. *There are three surd*, and two sonant Germanic aspirates; the first (ɢ) in *ich* is the smoothest and most anterior (§471,) forced forward by the closure required for close vowels;—the second (ġ) in *ach, buch*, the Greek χ, and according to some (but doubtfully) the Spanish j (jota;)—the third, the rough Swiss vibrant aspirate, as in *ich*=ɪəχ̃—a sound we have heard in Lɛnàpɛ. We have also heard the Swiss sound untrilled, as in χántōn, a canton. In the Swiss dialect, it does not vary before *i, e*, and from the slight vowel interposed in the word *ich*, the position of I seems too narrow for it, although they say gùət for gūt *good*, gedìənt, &c., where *id* accounts for the German and English *ie* spelling.

540. *We cannot determine* the relation of this χ̃ to the oriental aspirate of ʛ, (or surd of ghain,) having heard them at distant periods; but they are probably distinct.

541. *We use χ provisionally* (§386) for any Germanic or other allied *ch* sound which

* We have known a distinguished scholar to contend that 'sing' ought to be pronounced *sing-g*, because it has a final *g* in the spelling. This shows that the advantages of fŏnɒtɛpɪ (compare ɔʌ́nɛpɪ,) are not confined to the unlettered. See §27, note.

has not been particularly described or discriminated, although the proper power of χ is that in the German *buch*. Pantoléon, who speaks Ellenic, ascribes to Greek χ both the sounds of *buch* and *ich*. The smooth ˓c is heard (before *e*, *i*,) in the Spanish general, registro, (=˓cenĕrál, re˓cìstrŏ.)

542. ˓G *is recognised* in some dialects of German. We regard it as the sonant of ˓c. By G̃ (γ̃) we indicate the Ellenic (not Hellenic,) or modern Greek soft vibrant γ. *None of these* is the harsh oriental *gh* as we have heard it in Arabic and Armenian. This belongs to the deeper contact of Q. But most authorities consider the Germanic, Ellenic, and Oriental "*gh*" identic. Lepsius uses *r* for (G̃) the incorrectly named "guttural *r*," and Paulmier uses ŕ for Arabic ghain. See § 513.

543. We adopt Mr. Ellis's two key words betro*g*en (˓G) and köni*g*e (˓γ, g,) for the spirants of *g*. He adopts an additional character (a tailed i) for Spanish *j*.—*Universal Writing*, &c. p. 6′.

544. *The following notations* may be compared. Properly as the ɋ character (meaning the form of Pitman and Ellis, is formed on c, the ˓γ should be formed on g with the same appendage.

	buch,	*ich*,	*tage*,	*täglich*.		
	˓c	ɋ	˓g	g (˓γ)	γ̃	χ̃
Ellis	x	ɋ	ɣ	*g*		
Lepsius	χ̣	χ́	χ̓	χ̄	ṛ	
Müller	˓h	˓*y*	ʾh	ʾ*y*		
Rapp	χ	ϰ	*j*˓	*j*ʾ		

545. *We follow Rapp, Böhtlingk, Sjögren, Castrén*, Matushik, S'uñic', and Poklukar, in adopting the character 'J' for the initial of the English *year*, Belg. *jaar*, and German *jahr;* Latin JUGUᵐ, Ital. jugo (and giogo,) Spanish yugo, Gothic juk, Ger. joch, Angl. geoc, joc, Eng. yoke, = JOC. J is used with its historic value in the *English* alphabets of Hart, 1851; R. R., Phonotypic J. 1846, p. 160; and the Rev. W. M. Reynolds, (President of Wittenberg College, Ohio,) 1846.*

546. *The surd aspirate* ʼJ occurs in the English *hue, hew;*—yh of its discoverer Ellis.

546*a*. *Nasal* J̨ *occurs in Jakutish.* Böhtlingk's letter is j with a horizontal line through the top. We have heard it in Cherokee.

* He says (Lit. Record of Penna. College, Vol. 1, p. 48,)—"The letters c, q, x and y are rejected, the first three as superfluous, and the y *on account of its unsettled power* in English as well as in other languages." Here an author, by following Lepsius's Rule III, p. 82, rejects *y* and adopts *j*, whilst Lepsius does the reverse—thus demonstrating that the 'rule' which was unphilosophic is also impracticable, and therefore no *Rule*. See § 167, end of the note.

FAUCALS.

Q q, Q̈, 2̈ (2.)

547. *By faucals we mean* certain consonants of which the type is the oriental Q *qaf*, the 21st letter of the Arabic alphabet, and (ק) the 19th of the Hebrew. Qaf is a kind of posterior *cay*, made behind the palatal veil, and therefore incapable of nasality. Guided by description, we pronounced them correctly (except *ain*) before hearing them in nature.

548. *The surd aspirate of* Q is the seventh Arabic letter *qha*. Richardson says "it is generated by a gentle *vibration* in the throat." This removes it from Greek (χ) and German *ch*. Its letter would be ʿQ, but as this implies a smooth form, it is better to indicate the vibration by Q̈, or still better Q̈.

549. *The sonant of* Q̈ is the 19th letter '*ghain*' of the Arabic alphabet, and the third '*gimel*' (= gĭjmɛl,) of the Hebrew. We indicate it by 2 (not 2 with a straight base,) from its similarity to Q. The mark of vibration would be an advantage, and should a lenis form occur, its sign would be ʾ2.* Richardson (Arabic Dict.) says correctly, that it is "articulated in the throat with a *vibration* producing a sound like that given to *r* by the Northumbrians, or the noise made in *gargling*. . . . It seems to bear the same relation to *kh* as *b* to *p*." It is not the German *g* in *regen*, § 542.

550. *We cite Armenian examples* of Q̈, 2̈,—which, though identic with the Arabic equivalents, they seem to have a dialectic variation, as we have heard Armenian ghain replaced with Ellenic ghamma, § 542. The letters are purposely varied for comparison, here and in the next paragraph.

dɜndɜ2̈á,	*a cymbal.*	q̈ɛlc,	*the mind.*
Q̈ɐ̆Q̈ɐ̆ntrɛl,	*a neigh.*	Q̈ătɾ,	*a crucifix.*

551. *As independent* p|φ, t|θ, c|χ, can be formed without air from the lungs (§ 446,) so in the Chinook of Oregon, q|q is similarly treated, according to the pronunciation of Dr. J. K. Townsend, which we acquired. But Mr. Hale makes the sound tχl, in which he is probably wrong, because all agree that the Chinook sound is a very difficult one to pronounce, whilst Hale's is an easy combination. Moreover, the effect upon the ear is not unlike that in the word for *thigh* given in § 448, which we learnt in nature. In the fol-

* Mr. Hale notices a sound which may be a variety of this, in the Patagonian language. It is formed in the innermost part of the mouth, which opens a little, the tip of the tongue being applied to the lower gum. The *sonant* of Q seems to occur in Berber, and dialectically in Arabic—judging from the paper of F. W. Newman, Esq., in the Philol. Soc. Proceedings, 1843, Vol. 1, p. 137.

lowing examples (in which allowance must be made for two 'personal equations') the vowels are normal, and the diphthong as in *out*.

bĕʊqɬˈqèqɬˈqē, *grandmother*. ǫɬˈqaʌǫɬqˈaʌʊǫɬˈq, *yellow*.*

LARYNGALS.

ʾ	ʾ	ʾ	ʿ	*lenis*.
1	2	3	4	
ʻ	ʿ	h	ḥ	6, 7, 8, *aspirate*.
5	6	7	8	

552. *The laryngal contact* pertains to the larynx, and we adopt the term in preference to *glottal*, because this is commonly made to include the faucals or pharyngals. But the faucals of Lepsius are our laryngals.

553. *Many deny* that *h* is a consonant, because 'it is not made by contact or interruption.' But when the breath is impelled through an aperture which obstructs it, there is interruption, and if we vary the impulse we can make English *oo* and *w* with the same aperture.

554. *The walls of the glottis* can close, thus forming a consonant contact; and as the glottal fissure (§ 148) is the narrowest part of the breathing tube, it is the seat of the deepest point of interruption, and of *h*.

555. *The spiritus lenis* (ʾ) has been described in § 115*a*, but authors are not agreed about it. Some make it the Hebrew aleph, and Arabic hamza, about which opinions differ also. Max Müller says (Languages of the Seat of War, p. xxvii.–viii.,)—"We can more easily perceive what is meant by the spiritus lenis inherent in every unaspirated initial vowel, if we pronounce b l a c k i n g and b l a c k i n k . . . in b l a c k i n k, the i is ushered in by the spiritus lenis. This spiritus lenis is the Hamzeh of the Arabs. . . . Its sound is produced by the opening of the larynx, but there is no previous effort of closing the larynx which alone could be said to give it an explosive character." *a*. This describes the spiritus lenis as understood by moderns, *but the hamza is nothing like it.*

556. *Ellis gives the spiritus lenis* as occurring between *ao* in *a,orta*, being "the slight effort made when any vowel sound is uttered," whilst in the hamza—"the effort of

* This sound is probably identic with that described by the late Rev. Emmanuel Naxera, a Mexican ecclesiastic, as found in the Othomi language of that country. "K simplex vel duplex est. Duplex Hispano-Mexicani grammatici *cc castanuelas* vocant, quia ejus sonus similis est stridori à simiâ facto, nuces frangenti. Litteris *cc*, *qq*, vel. *qh* oculis pingitur. T, aliquandò etiàm sonitu effertur." (§ 448.)—Am. Phil. Trans. Vol. V, new series, p. 254, 1887.

This Tshinook faucal may be the Hottentot guttural clack, described by Thunberg as "the most difficult of all, and performed quite low down in the throat, with the very root of the tongue."

enunciation and separation of the following vowel from preceding sounds is more distinct. An exaggeration of this produces a kind of *bleat*, which is the true Arabic *ġain*."— Univ. Writing, p. 5″ below.

557. *Lepsius says*—"By closing the throat and then opening it to pronounce a vowel, we produce the slight explosive sound which in the Eastern languages is marked separately, but not in the European, except in the Greek. We perceive it distinctly between two vowels which, following each other, are pronounced separately, as in *go 'over*." Here the *hamza is correctly described*, and the English effect improperly referred to it.

558. *We do not think it necessary* to represent the initial effect of *at* (*'at*, or better—ʰat, or ˌat, with whispered *a*,) as distinguished from *hat*, unless the glottis is closed—and we do not mean the *epiglottis*, which cannot act in speech.

559. *We deem the effect* in black ¨ink, a¨órta, go ¨òver, Fr. le ¨héros, as a separation akin to diaeresis (§168,) or an accentual difference without separation, as in zóŏphyte, néŏphyte, zŏólogy, nĕólogy.

560. *Hiatus* (ʾ) *is a break or pause* commonly caused by dropping an intermediate element and not closing the remainder, the word and each of its constituents retaining their proper length, as in saying *a ʾorse* (not *a orse*,) for *a horse*, or *a ¨orse*. See Ellis, Essentials, p. 41. It would occur in zo-ophyte, if the least pause were made, and avoiding *hamza*.

561. *Such a hiatus* has been attributed to the name Hawai'i, as compared with the earlier New Zealand word hawai*k*i. But whilst one traveller called our attention to this 'hiatus,' two others pronounced this word (as they believed) in the native mode, with a genuine hamza. (§568.) Wm. Ellis (Polynesian Researches, vol. 4, ch. 2,) does not mention anything of the kind in giving the pronunciation of *Hawaii*, but in his appendix on the language, he speaks of "a peculiar break" distinguishing *o'u* (*I*) from *ou* (*you*,) this being, as it seems, a diphthong beginning with true *o*.

562. *We do not adopt the two dots* of §§227, 306, to indicate hiatus, because they are used for an etymologic ¨and not for a phonetic purpose; and because we prefer a sign more like that used for the (hamza, §568,) closure of the glottis—although *hiatus does not belong to any contact.*

563. *The sign* (ʿ) *represents the slight phase*, whether aspirate, independent (§446,) or even vocal, at the close of abrupt syllables, as in *tap*ʿ, tubʿ, or tubḥ.

564. *The sign* (') *indicates* the opposite phase to ʿ, where the breath is not allowed to escape after *tap*' (the lips remaining closed,) as in Chinese. This inconvenient notation is preferred to (') because this is used to contradict aspiration like that of *s*, *ṕ*, not the

false 'aspiration' like that of *p* in 'haphazard,' which is no more aspirate than the *p* in *up stairs*.

565. H, h, *is the common English* and German *h*, in the syllables held, hat, hast, hose. It is unknown to French, Italian, Spanish, Russian, and Ellenic.

566. ḥ, *ɸ*, *is for the eighth Hebrew* letter hheth (=↑ejϑ,) and the sixth (hha) of the Arabic alphabet. We adopt the Greek ψ inverted (but of a better form than these,) which is nearly the Ethiopic and Amharic letter of probably the same Arabic *hha*.

567. ḥ (ḥ) *is commonly called* an emphatic *h*, and often represented by *hh*. As heard by us, it is an enforced, somewhat *close h*, with a tendency to scrape along the throat, and consequently, it is not a pulmonic aspirate. But S'uñic' probably describes a different element, for he compares it to the *open* coughing of an ox, which differs from *h* as warm or pulmonic breath differs from it.* The glottis would be opened for such an element beyond the normal position, so as to render more lung exertion necessary, to give it body. The pulmonic breath is often used in the continuous portion of a cough. Should these two varieties be found to exist in speech, they will run (from the closer to the more open direction) ↑, h, ḥ.

567*a*. *The Florentine aspirate* in casa, misericordia, *ch*i, we have casually heard, and believe it to be ↑, and also the Spanish *j*, *x*, before *a*, *o*, *u*, as in jabon (soap, = ↑ā́bón,) and the geographical name San Juan (= săn↑v̊an,) in English—sᴀn v̆vɒn, which a Chinese would accept for 'crooked mountain.'

568. *Hamza is a closure of the glottis*, which we indicate by ▷. It occurs as a cutting off of the breath at the beginning of a cough, (▷h, or ▷ɸ,) during laughter, and when the breath is held in lifting a heavy weight, or in leaping. It is found in Wyandot (§ 486) and Chippeway.

569. *Rapp considers the spiritus lenis* a closure, and writes it (1, 84) with *ɣ*. He cites a South German negation (1,166; 2,267,) with which we are vernacularly familiar, as "*hãɣɣã*," doubling the sign to shorten the (nasal) vowel.† We would write it (with *h* nasal ¨also, h꜀ɐ̃˜▷ɐ̆˜, both vowels being short, the first accented.‡ It has several vowelless forms which he writes *hmmɣm*, *hnnɣn*, &c., (ᵉmm'▷m, ᵉnn'▷n, ᵉG꜀G꜀'▷G, or ᵉ∫∫'▷∫.)

570. *The Arabic and Hebrew* ʿain Volney regarded as a vowel modification, using a marked a (e, o) for it, the sound being formed with a varying vowel aperture. The vowel is heard with a simultaneous faucal scrape, which may be regarded as a sufficient

* See Ellis, Essentials, p. 40, § 5, 6

† The corresponding *yes*, which Rapp writes "*hmhm*'" is rather mᵉmm', the second syllable accented. In English a single long *m* is sometimes used for *yes*, as cited in Medhurst's Chinese Dictionary.

‡ Not having examined Ellenic with a view to detect hamza, we have no settled opinion in regard to the *ancient* spiritus lenis.

interruption to make a modified liquid; and the vowel and scraping effect being simultaneous, they cannot be represented by a consonant character preceding a vowel one, as ⸢a. We propose a minute ◂ below the vowel character.

571. *The sanscrit visarga* (:) is a final "strong aspirate" (Sir W. J.) which becomes *s* in languages which do not admit it, as the Hebrew final of *Jonah*, *Jeremiah*, is either pronounced *s*, or suppresst. The Sanscrit sound was probably *h* pronounced with the mouth not sufficiently open, causing the breath to strike along the fauces and palate, thereby receiving a modification suggestive of *χ* and *s*. We represent it by the figure 5, which is sufficiently like one of the German forms of capital *h*, whilst it is equally suggestive of *s*.

572. *The following systems of notation* have been proposed or used for the members of this, and of the preceding contact.

	FAUCALS.			LARYNGALS.				
	ϙ	q̃	ƨ	h	ɦ	"	⊳	⊲
Hebrew,	ק	כ	ג	ח	ה		א	ע
Volney,	q	χ	γ	h	h*		'	a*
Lepsius,	q	χ	χ̣	ḥ	ḥ		'	;
Richardson,	ḳ	kh	gh	ḥ	ḥ			**
Müller,	q	ʿh	ʾh	h	hʿ	ʾ		ʾh
Paulmier,	k′	kh	r′	h	h′			ʾ
Eichhoff,	ʞ	ʞ′	ɢ′	ʜ	ʜ†			*A, &c.
Ellis,	q	x	g*	h	h*	ı	a*	ʕ
S'ufiic',	ʿk	ḫ	ġ	h				**
Riggs,			ġ	h				

* A peculiar form on this basis. ** The Arabic letter. † With a short vertical medial line.

LARYNGO-FAUCAL.

Q q.

573. *In the Waco of Texas*, the entire surface from the glottis to the Q position, form a contact which is opened suddenly and independent of the lungs, upon a vowel conformation, producing a clack or smack like that which accompanies the separation of the closed palms when wet with soap and water. The preceding closure bears some resemblance to the incipient act of swallowing. We describe it from our mode of producing it, and we were said to be the first person with whom it was not vernacular, who had acquired it.*

* We pronounced Arabic *q*, *gh*, and *gh*, and Welsh *ll*, *rh*, as ascertained from descriptions, before they had been heard from natives, but we did not recognise *hamza* from the descriptions, although we were familiar with the phenomenon.

574. *The following words are Waco* (vɛ'co,) the *r* being the vibrant European element. The word for *nose* (tɪ'sɑ ▸ ',) is (except the first vowel,) whispered.

ɑɪtɪɑq|‥,	*eye.*	ɑɪtɪɑèsq|‥,	*brow.*
ʊ'rsq|‥,	*foot.*	ʊ'rsèt·q|‥,	*shoe.*
ɨsq|‥,	*hand.*	tsq| ▸ ɨtsq|‥,	*finger.*
èɑo''vva·rq|‥,	*leggins.*	tscvɪtsq|‥,	*finger-nail.*
ʊ'tsq|‥ʊrsq|‥,	*cheek.*	cèɑq|‥,	*breast.*

575. *The following is our arrangement* of the consonants according to the scheme in § 193, excluding theoretic ones. The blanks are useful in showing the phases which are not known to be in use. Letters separated by a comma, belong to the same point of contact, as the semi-vowel V (No. 5) and its coalescent.

576. *There are four great divisions* of the consonants, according to their formation by the *lips*, the *apex* of the tongue, the *base* of the tongue, and the *larynx*.

577. SCHEME OF THE CONSONANTS.

					labial. ¶ 441–3	dental. 469	sigmal. 496	lingual. 488	cerebral. 491	palatal. 514	guttural. 525	faucal. 547	laryngal. 552
INTERRUPTION	little	LIQUIDS.	nasal	sonant	lenis 1	v, 'v	-	-	-	-	ȷ,	J, ȷ,	-	'
				surd	asper 2	-,	-	-	-	-	-	-	-	-
				sonant	lenis 3	-,	-	-	-	-	-	-	-	-
				surd	asper 4	-,	-	-	-	-	-	-	-	-
			pure	sonant	lenis 5	v, 'v	l ɬ r, ɾ, ɽ	l,	l,	ȷ	J, ȷ	-	-	-
				surd	asper 6	-	'1 ʔ	-, 'r,	-	-	-	-	-	-
				sonant	lenis 7	-	-	-	-	-	-	-	-	▸
				surd	asper 8	''v	''l	''r, ''r,	-	-	''ȷ	''ȷ	5	h, ɦ
	much	MUTES.	nasal	sonant	lenis 1′	m	n	-	n,	n,	-	ʃ		
				surd	asper 2′	-,	'n	-	-	-	ȷ, ʔ § 198	-		
				sonant	lenis 3′	-,	-	-	-	-	-	-		
				surd	asper 4′	'm	'n	-	-	-	-	-		
			pure	sonant	lenis 5′	b	d	-	d,	d,	-	G	-	
				surd	asper 6′	'b ʙ ɑ	-	ʒ ɒ ʒ,	-	-	ȷ	ƍ 'G	ƍ	
				sonant	lenis 7′	p	t	-	t,	t,	-	c	q ʡ	▸
				surd	asper 8′	'p f ϑ	-	s o s,	s,	f	q 'c	'q	-	

§ 490

CHAPTER XVI.

EXAMPLES.

The difficulties attending the construction of a phonetic alphabet are so great, that those who have not spent many months over the task, can have no adequate conception of them. After the invention of an alphabet which seems theoretically perfect, the luckless inventor too frequently finds, that when practically applied it will not realise his expectations. Even should it work tolerably well, the difficult question arises how far to employ it properly. Phonetic spelling is more difficult in English than it would be in any other language, though if the Irish or Scotch pronunciation were adopted, or even that of the laboring classes in the agricultural districts, the task would be comparatively easy.—*Phonotypic Journal*, 1846, p. 156.

In expressing the sounds of a new language . . . the missionary should be guided entirely by ear, without paying any regard to etymological considerations, which are too apt to mislead even the most accomplished scholar. *Max Muller*, p. xx. . . . we feel how essential it is, in a first attempt to fix a spoken language, that the writer should not be swayed by any hasty etymological theories. The missionary should give *a true transcript of a spoken language*, and leave it to others to decipher it. Id. lxxxi.

§ 578. *Some languages are readily written*, even by children, and it is difficult for one who knows English alone, to believe that various languages have no more than the five primary vowels of Latin; or that the vowel of *up* is not universal. Yet in Dacòta, "The vowels are five in number, and have each one uniform sound," except when nasalised, and "all the syllables are enunciated plainly and fully." The vowels are "*a* in *father*, *e* in *they*, *i* in *marine*, *o* in *go*, and *u* in *food*."—*Riggs*. In Hawaiian, "*a* is always as in *father*, or shorter as in *ăha*, *e* in *hate*, *i* in *machine*, *o* in *no*, *u* in *food*. The short sound of *i* in *bit* seldom occurs."—*Wm. Ellis*, Polynesian Researches.

579. *The unwritten Polynesian languages* have perhaps more resemblance than French and Italian, Anglish and English, although they have been separated probably two thousand years; and Ellenic has been permanent for the last three centuries, whilst English has greatly varied, and is still quite unsettled.

580. *English is an unsettled language*, because, being composite, its materials have not yet acquired their natural relations to each other, wherein it resembles a chemical mixture which requires many years or cycles before the results of the various affinities appear in a permanent crystallisation.

581. *The orthoepists blind themselves* to the genius and tendencies of the language, and represent a jargon which no one uses but the child learning to read from divided syllables, who turns 'li-on' into *lie on;* or the German, who fancies that the first syllable of 'phantom' occurs in 'elephant,' because they resemble in German and French.

582. *We do not object* to writing words syllabically, if the correct syllables are used—if *gu* in *gun* is admitted in *ágony*, rather than *go* or *gone*, the use of which would justify 'gone-shot' for *gunshot*, and 'gone'r' for *gunner*. Such syllabic spelling would be like a

theory of the catenary curve drawn from the consideration of a single detached link hung upon two nails,—such factitious forms being less like words than a link is like a chain.

583. *Every English word* of three or more syllables requires the vowel ʉ, ə, ɪ, or a syllable without a vowel, when the structure of the word does not interfere with it, as *graduate, self-sameness, portmanteau,* and the difficulty is to decide upon the proper vowel, as in candidate, agitate, elevate, expedite, avenue, maladiction,—for vernacular practice cannot be controlled by the consideration that the original was an adverb rather than an adjective, unless it can be shown that the adverbial form has been preserved in speech, and we think it is not. With the spelling we have nothing to do.

584. *Phonetic readings* of '*usual*' and '*feature,*' with *zh-y-oo, tsh-y-oo,* we do not consider English, because *y* of *u* or *yoo* has become *zh, sh,* leaving a vowel without a preceding *y.* (§ 311.) Nor is *dif*-thong correct, having been dissimilated, (§ 292–3,) and none but a scholar, a greekist, (not Greeceist,) or foreigner, could sanction an English form like 'dif-thon-dzhise' (for dip-thong-ise,) a form which would allow but one word for *singing* and *singeing.* Farther, a *cramberry* is no more a *cran* berry than 'amber' is *anber,* 'imbue' *inbue,* or 'aunt' *amt,* Latin AM̆ĬTă.*

585. *It is supposed by some* that English spelling "corresponded at some time or other to the sound of words." (Müller, p. xviii.) We think not. English never had signs for its commonest vowels, and as it is difficult to determine where they occur, the orthoepists find it easier to follow the accidents of a spelling which at no time represented the language, than to enter seriously upon an inquiry into the laws of English speech. We admit that words like *action* once had *o,* and ended with *own,* as in Spanish and German, but we doubt whether the *on* of *honest* ever formed a part of them, and we *know* that it does not occur in the English of 1858. The vowel of *ebb* is common enough in English, but hardly so common as to occur thirteen times in fourteen consecutive words containing sixty elements, thus constituting one-fifth of the whole. Yet it has been indicated as occurring thus in the fragment—"several passages were then inserted, and in

* We do not recommend our own pronunciation,—forms like tra-vlr, difrns, instnss, genrl, temprns, being too condensed—too Attic, for ordinary use, besides being more influenced by the spelling than the genius of the language allows. In looking through the Phonetic periodicals, whilst preparing this essay, we find that we have been ignorant of the name of many public characters. To us there was a fictitious Clánricàrd within two weeks, and whilst we know that our two friends "Mackay" are respectively Mecè and Mecŏj, we do not know the name of the poet Charles Mackay, though we have heard him named Mác. We mispronounced the proper names Tyrwhitt, Napier, Hereford, Bowring (a gentleman we have more recently met,) Keightley (which we had classed with Weightman,) Howick, Moore, Mavor, Latham, Younatt, Lowth, Houghton (Hoton, which we classed with Hough, or Huf,) 'Aurora Leigh,' leg? lay? lee? lie? Once, when in Boston, Massachusetts, with a fellow traveller, we wished to see a public building of which we had read, named Faneuil Hall, and after discussing what we should ask for, we wisely concluded that the natives would not understand us, or would laugh at our pronunciation—so we neither saw the building nor learnt its name.

them some *errors* occur, which he begs"—Our own pronunciation of *statue* is stát-yoo= stʌtjʊ, but it appears that some pronounce it with tr, in *chew*. In a phonetic periodical, the former is preferred, because "it is a neater sound, and is more pleasant to the eye." That is, 't' is handsomer than the character which was then used for tr. But the argument falls with the fall of the character, and such arguments are not valid at any time.

586. *The French words* 'dépendance' and 'diffidence' with their identic final syllable, were received as identic, and have so remained. Yet a few elocutionists will have it that one of these now English words ends like *dance* and the other like *dense*. But even were this so, as the English and French do not usually alter their orthography with the variations of speech, it is likely that the *dense* pronunciation would have fallen to 'dependance,' and *dance* to 'diffidence,' as in the Italian 'dipendenza' and 'diffidanza.'

587. *Some prefer the pronunciation* of men of letters, but in the present state of phonetic and prosodic knowledge, as exhibited in the great majority of the grammars, men of letters constitute the ignorant class, with the perversions of French analogies added to their ignorance; and if the vulgar corrupt (develop?) words, they are at least true to the vernacular laws. But in comparing a lettered with an illiterate pronunciation, the two must be of the same locality and dialect, *church* cannot be judged by *kirk;* and the words must be vernacular, as one, two, three; body, head, arm, eye;—land, field, water, fire, house, rain, star, sun, moon.

588. *The misuse of h is unknown* to large districts and various dialects. In fact, although we have known *h* to be omitted, we have never heard *hat* for *at*, *hear* for *ear*, &c. As the Welsh *poat* for *boat* is due to the Welsh law of permutation, so the cockney misplacement of *h* may be a C^{h}eltic remnant based on a form like the Irish *an oigh* (the virgin,) *na hogha* (of the virgins.)*

589. *The three different vowels* of *ooze*, *up*, *eel*, were once given to us by three lettered Cherokees as occurring in the second syllable (of four) of their word for *eight*. We considered it likely that the *up* was correct, although a 'syllabic' writer might have considered it as certainly wrong; but when we asked an unlettered native, he used no vowel whatever in this place, and we deemed him correct and the others perverted by their syl-

* But more probably the misuse of *h*, and the confusion between English *w* and *v*, are due to the differences between the dialects of Anglish and those of French. Anglish and Latin had English *w*, which the French replaced with their *v*, so that there was a continual conflict between the two in words like *will*, *woll*, *way*, *veer;* and in *wine* and *vin*-egar the result is heterogeneous. H, which is stable in Teutonic, is evanescent in Romanic, and wanting in modern French, which accounts for its misuse in the natural dialect of the South of England. It is worthy of remark that the analogous confusion between sonant and surd *th* existing in the dialects of Anglish, has resulted in uniformity, independently of the spelling; for practice varied to such an extent that on the adoption of the Roman alphabet, both were represented by *th*—which each reader was expected to read in his own mode.

labic alphabet, which forces them to write fictitiously, and then to speak as they write, instead of doing the reverse. The word was cu‾levôcı´, in three syllables, and having Welsh *ll*. Similarly, if one orthoepist would model *seven* on the Gothic sib*un*, another on the Anglish sy*fon*, and a third on the old *E*nglish sev*en*, or Belgian sèlen (with *e* of *end*,) we would still prefer saying *sevn* (= sɛln,) with the *I*nglish.

ENGLISH.

590. *As there is much confusion* between the medial of the *awe* vowel in pond, cross, dross, horse, (§ 403;) and that of *odd* in rod, John, (§ 407,) transition forms will be found useful until practice determines how the difficulties are to be avoided. We will therefore use ɑ· provisionally for the open medials, as in *George*, ɔ· for the close, as in *John*, and ϐ or ϱ for the doubtful.

591. *The labial vowels* have a similar difficulty, and may require a transition letter, (as Mr. Pitman's angular u, for doubtful forms like *brew*, *imbrue*, *crew*, § 424–5, which we are hardly competent to decide upon. Leaving quantity out of the question, we pronounce *brew*, &c., with ʊ whilst Worcester (=vust*r*,) probably the most judicious of the English orthoepists, refers them to the key word *move*.

592. VOWELS.

1	a	*arm*	§370.	10	ʌ	*aisle*	§400.
2	ʊ	*up*	374.	11	ɑ	*awe*	402.
3	ɪ	*add*	378.	11′	(ϱ pond, rod)		403, 407.
4	ɛ	th*é*re	388.	12	ɔ	*odd*	405.
5	ɛ	*e*bb	384.	13	o	*o*we	416.
6	e	th*ey*	391.	13′	(o	whole)	415.
7	ɐ	buffet	392.	14	u	p*oo*l	422.
8	ɩ	p*i*ty	395.	–	(..	crew)	591.
9	i	f*ie*ld	399.	15	ʊ	p*u*ll	424.

593. CONSONANTS.

1	v̇	*n*o*w*									25	j̇	
2	v	*w*ay	10	l	16	r	17	ɾ	18	ɾ	21	ȷ	26	j	
3	v̋	*wh*ey		–				–			22	ȷ̃	27	j̃	31 h
4	m		11	n				–			–		28	ɾ	
5	m̃	*hm*		–				–			–		–		
6	b		12	d				–			–		29	ɢ	
7	ʟ	v*ei*n	13	ɑ			19	ȝ			23	ʃ		–	
8	p		14	t				–			–		30	c	
9	f		15	ϯ			20	ϐ			24	ſ		–	
¶¶	541–59.		464–9.				495.				514.		525.		

594. *The vowel writing forms* are as follows. No. 2, an *ı* wide below, with the loop of *e* added separately; or, a figure 1 with *e* added against it, being Mr. Graham's letter for the vowel of *her*. The more open ɐ of *urn*, if required, to be similarly made of *ɔe;* or like ɐ, by beginning with the top hook, then forming the loop and finishing the base. No. 3, Greek *α* made by commencing with the top of *ı*, then curving down towards the left, forming the circle, and finishing the end of the *ı*;—or, making a character (ɑ) like '&' without the upper loop. No. 4, when not satisfactorily made, may have the circumflex (^) placed over it. No. 8, like *i*, but running into (‿) below; it is not to be dotted unless to prevent obscurity. No 9, the common *i*, a bad letter, because it forms part of *u*, and requires a dot, but *not in print*. A good script form is a desideratum. No. 10, like *a* with a break to the left in the middle of the *ı* part;—or, with the *ı* made straight, and a tail thrown back into the *o*, as *t* is sometimes made without lifting the pen. The latter is Mr. Graham's *a* in *at*. No. 11, *a* with an inward break on the left of the *o*.

595. *The consonant writing forms* are as follows. No. 2, the common *v*. No. 1, the same dotted, or *ʋ* to avoid the marking. No. 3, a straight line running into a curve (‿) continued up and ending like *v*, unless appropriated in some language. No. 3, 5, 22, 27, may have the surd mark omitted, but in writing only. No. 7, a *v* with a break towards the right, in the middle of the descending stem. No. 17, as printed, or the form of *r* made with the ascending stroke continued into (˘) a short quantity mark, and ending with *ı*. (This would have formed a good character for *i*.) No. 18, *r* with the stem running below the line. No. 23, we use Mr. Ellis's character, a line (*/*) continuing into an inverted script *l*-or *γ*. No. 24, a long script *s*. No. 25, like *j* with two dots, or, to avoid these, the tail may be turned to the right.

596. *Observe* that, as in English, the coalescents No. 1 and 25 are never initial, and always follow vowels; they may be represented by v and j, but only in writing. §173; Rule 1, 2, §47, 56.

597. *The different order* given to the alphabetic characters is a great barrier to the use of dictionaries, as in those of Hebrew, Russian, and Sanscrit. It is even inconvenient to use Greek and Latin lexicons at the same time, or Danish and German. Thus in Danish and Swedish, ö, &c., follow z, so that Dan. bœlte (belt) follows bytte (booty;) and Sw. däck (deck,) and död (death) come after dum (dull,) and dyr (dear.)

598. *The attempts to arrange the alphabet* in physiological order have not been satisfactory; in fact, it cannot be done in a single series, and would be more inconvenient than useful in dictionaries. We therefore interpolate the new English letters among those of the Latin alphabet. This gives the series—

599.

a	ʌ	ʎ	ɑ	ɒ	b	c	d		
e	ɛ	ɜ	ʊ	ə	f	ɢ	h		
ɪ	ɩ	j	ȷ	ǰ	l	m	m̃	n	ɾ
o	p	r	ɾ	ɾ	s	ʒ	ȝ	ʃ	ȷ	ɪ	ɑ	t
u	ʊ	v̇	v	v̈	ʁ							

COLLOQUIAL ENGLISH.

600. *The following example* is transliterated from one given by Ellis, (Essentials, p. 104,) being his translation of a passage from Pott's Etymologic Researches, and printed here *without any perversion of the powers of the Latin alphabet.*

601. For convenience of printing in this version we use ɪ for the more anterior ȷ, ʊ for a, r undotted (§ 501,) U for U, and j, v, for the coalescents; and although ɪ, ȷ, are identic, ɪ is preferred in certain positions when printed, to increase the distinctness.

602.

The written and printed representation of the sounds of language by means
ɑʊ rɪtn ənd prɪntəd rɐpʊɪɜentèrən əʁ ɑʊ sʌvndɜ əʁ lʌʃɢvɪdȷ bʌj mɪnɜ
of characters which are insufficient both in kind and number, and which must therefore
əʁ cʌ́ɾɐctʊɜ, ᵛvvɪɾ aɾ ɪnsʊfɪ́ɾənt, bŏɪ ɪn cʌjnd ənd nʊ́mbʊ, ənd v̊vɪtɾ mʊst ɑɛʊfõʊ
be combined or modified if we would give a graphical symbolisation of
bɪ cʊmbʌjnd ɑ·ɾ [§ 403, 7, 8,] mŏdəfʌjd ɪf vɪ vʊd ɢɪʁ ʊ ɢʊʌ́fɪcl sɪmbl̈ ɪɜərən əʁ
the phonetic elements with only some degree of exactness and convenience, has been, from
ɑʊ fŏnɛtɪc éləments vɪɑ ónlɪ sʊm dɪɢʊ̀ əʁ ɛgɜʌctnɛs ənd cʊnʁɪ̀nȷəns, hʌɜ bɪn, fʊʊm
all time, for nations as well as individuals, linguistical students not
ɑl tʌjm, fɑ·ɾ néɾənɜ əɜ vɛl əɜ ɪndəʁɪdȷʊəlɜ [ɪndəʁɪdȷəl] lɪʃɢvɪstɪcl stȷʊdnts nɒt
excepted, one of the most necessary and one of the most difficult of problems, and has
ɛcsɛ́ptəd, vʊn əʁ ɑʊ mŏst nésəsəɾɪ ənd vʊn əʁ ɑʊ mŏst dɪfɪcəlt əʁ pʊ́bləmɜ, ənd hʌɜ
consequently scarcely ever been happily solved. Let this teach us that the invention
cɒnsɪcvəntlɪ scɛ́ɾslɪ ɛʁv bɪn hʌpəlɪ sɑ·lʁd. lɛt ɑɪs tìtɾ ʊs ɑʊt ɑʊ ɪnʁɛ ɛ nɾən
of writing, the greatest and most important invention which the human mind has
ɑʊ rʌjtɪɾ, ɑʊ ɢɾetəst n mŏst ɪmpɑ́ɾtnt ɪnʁɛ́nɾən v̊vɪtɾ ɑʊ ȷ̊ȷʊ̀mən mʌjnd [mænd] hʌɜ
ever made, and which, as it indeed almost exceeds its strength, has been often
ɛʁʊ med, ənd ᵛvvɪtɾ, ʌɜ ɪt ɪndìd ɑlmŏst ɛcsìd ɪts stɾɛɾ? [stɾɛn??] hʌɜ bɪn ɑ·ʹfn
and not unjustly attributed to the gods; like the organism of a state, at once
[ŏfn] ənd nɒt ənd ȷʊ́stlɪ ʌtɾɪ́bʊətəd tʊ ɑʊ ɢɑ·dɜ; lʌjc ɑʊ ŏɾɢənɪsm əʁ ʊ stĕt, ʌt vʊns
simple and complex, is not the work of individuals but of centuries perhaps of
sɪ́mpl ən cɒmplɛcs, ɪɜ nɒt ʊʊ vʊɾc əʁ ɪndəʁɪ́dȷʊəlɜ bʊt əʁ sɛ́ntᵛȳ ʏ ʊɾɪɜ pɔɾhʌps əʁ
thousands of years.
ɪʌ́ɾvəndɜ əʁ ȷɪȷɜ.

603. *This specimen has suggested to us* the probability that three kinds of *r* will confuse many writers, so that practically 'r' initial, and '𝔯' will be sufficient; but if 'r' is restricted to a single tap of the tongue (§ 501,) it should have a superior dot—neglected here, from the difficulty of printing it.

604. *We at first wrote* 'students' with 'ə,' then excluded it, and we changed the second vowel of 'individual' from ɪ to ə, although we use ɪ in our own speech, from heterotypic influences, as we believe. We think the cases rare, where the same vowel occurs thrice in the same word. It seems contrary to the laws of English.

605. *We had written* 'representation' without a vowel in -tion,—and 'invention' with it, but finding a vowel aperture to be made, we wrote ə, which is correctly placed in problem, convenience, greatest, exactness,—but is it not ʊ? in human, and difficult. We think not. Nevertheless, a difficulty in discriminating them may require ʊ to be used for both, in the one case (ə) dotting it beneath. At first we assigned ʊ to organism, then ə.

606. *The words* 'therefore' and 'scarcely,' in which the open ɛ of thêre is shortened (as indicated by the acute accentual,) without closing to *e*—may really require the use of 'e,' § 385–90.

607. FAVST,

'translated by Emma Stanwick.' Read ɑ, ɪ, e, o,ˋ, *long*, unless otherwise marked; and ɔ, ʊ, ɪ,′, *short*.

608. Thou full-orb'd moon! Would thou wert gazing now,
609. ɑʌv fʊl-ɑɾbdˈ muˋn! vʊd ɑʌ′v vʊɾt gèzɪɢ, nʌv,

For the last time upon my troubled brow!
fɑɾ [§ 403] ɑʊ last tʌ′jm ʊpɔ́n mɪ tɾʊ′bld bɾʌv!

Beside this desk, at midnight, seated here,
bɪsʌ′jd ɑɪs dɛ́scˈ, ɹt mɪ′dnæt, sìtəd hìɾ,

Oft have I watch'd to hail thy soothing beam;
ɑft hʌɛ æ vɑ′tɾt tʊ hel ɑæ sùɑɪʃ bɪˋm;

Then, pensive friend, thou cam'st, my soul to cheer;
ɑɛn, pɛ́nsɪɛ, frɛ́ndˈ, ɑʌv cèmstˈ, mɪ sòl tʊ trìɾ;

Shedding o'er book and scrolls thy silv'ry gleam.
ɾɛ́dɪʃ oɾ bʊ′cs nd scɾɔ̀lz dæ sɪ′lɛɾɪ ɢlìm.

O that I could, in thy beloved light,
o ɑʊt æ cʊ′d, ɪn ɑæ′ bɪlɤ′ɛəd˝ læ′t,

Now wander freely on some Alpine height;
nʌ′v vɑˋndɾ frìlɪ ɔn sʊm ɹ′lpɪn hæt;

Could I round mountain caves with spirits ride,
cʊd ʌ′j ɾʌvnd mʌ′vntən cèɛs vɪɑ spɪ́vəts ɾʌˋjd,

In thy mild radiance o'er the meadows glide,
ɪn ɑaj majld˙ rèdʲəns o„r* ɑʊ médəə ɢlaˋjd,
And purged from knowledge-fumes my strength renew,
ənd pʊˊrdjd frʊm nɔˊlɪdʲ-fjʊˋmə mɪ stʏéˊrɪ rɪnJʊˋ,
Bathing my spirit in thy healing dew.
bèɑɪʃ mɪ spɪˊrət ɪn ɑʌj hìlɪʃ dJʊˋ.

*'ɔr' in line 6.

GERMAN.

610. *The next is the original* of the preceding example, which we retransliterate into German from Rapp's phonetic version (4, 92.) We follow Rapp's pronunciation, except that he uses a alone, for our a and ʌ. Had the phonetic version been our own, we would have put 'mondən' in the first line, and 'lɛtstən' in the second. The syllables without vowels are our own. Read ʊ, ʌ, short.

O sähest du voller monden-schein,
o ǝēst du [tu?] fōlər mōndɛn-rʌjn,
o might you look full moonshine

Zum letzten mal auf meine pein,
tsʊ „m lɛtstɛn māl ʌˊvf mʌjnĕ pʌjn,
for the last time on my pain,

Den ich so manche mitter-nacht
dēn ɪɋ ǝo mʌnɋĕ mɪtr-nʌć̇t [nʌχt]
that I so often midnight

An diesen pult heran-gewacht;
vn dìǝəm pʊlt hɛrʌˊn-ɢĕɃʌć̇t;
at this desk here watched;

dann über büchern und papier,
dʌn yˇbr byˇɋrn ʊnd [ʊnt?] pʌpìr,
then over books and paper,

Trüb-sel'ger freund erschienst du [tu?] mir!
tryˇb-ǝēl„ɋər frʊjnd ərrìnst du mìr!
sad friend shine you to me.

Ach könnt' ich doch auf berges-höhen
ʌć̇ cʁˇnt˝ ɪɋ dŏć̇ ʌvf bɛrɋəs-hʁ„n
o could I but on mountain-height

In deinem lieben lichte gehen,
ɪn dʌˊjnəm lìbɛn lɪˊɋtĕ ɢēn
in your loved light go

Um berges höhle mit geistern schweben,
ŭm bɛrɋəs hʁˇlĕ mɪt ɢʌjstrn rɃèbɛn,
round mountain caves with spirits hover

Auf wiesen in deinem dämmer weben,
ʌˊvf Ƀìsɛn ɪn dʌjnəm dɛ́mr Ƀèbɛn,
over meadows in your radiance float

Von allem wissens-qualm entladen
fŏn ʌˊləm Ƀɪsɛns-cɃʌlm ɛntˇlàdɛn
from all knowledge-vapor unburdened

In deinem thau gesund mich baden!
ɪn dʌˊjnəm tʌˊv ɢĕəʊˊnd mɪɋ bādɛn!
in your dew salubrious, me bathe.

WESTERWALDIAN.

612. *The following is the first verse* of a popular poem in the German dialect of the Westerwald district on the east side of the Rhein. It is given in K. Ch. L. Schmidt's Westerwäldisches Idiotikon, (Hadamar, 1800,) under the title—Das Hotzel-Mous-Lied, oder Lob der Hotzeln. A *hotzel* (*hútzel* in Pennsylvania,) is a dried apple, pear, or peach,

especially if dried entire, and *mous* in their cooked condition. The first line of the original stands—

Nu ha n' eich all mein Lebelang—

where n' seems to be a fulcrum to prevent the concurrence of two vowels. The *i* of ich (*I*) will be observed to be diphthongal, as in English; and, in fact, most of the shades of English pronunciation are present in the idiotic forms of German and its cognates.

DA˘s hŏtsl mūs.

613.

nū hɔ̄ -n- ʌjǫ ʌ˘l mʊ̯j lē'bəlʌʃ
now have I all my life-long

nʌvt bésərs ʌ˘s hŏtsln gésə,
naught better as 'hootsls' eaten,

'bɔ̄n ..ǫ tĕr cɑ̄ hɛt'.. [hɛt] dɑ̄ 'bēr [bɔ̯r] ʌjǫ crʌ˘ʃc,
when (*wann*) I of-it none had, then were (subjnct.) I sick,

'bɔ̄n īr ət rɛǫt [rɛgt] 'bəlt 'bésə
if (*wenn*) you *it!* right would know.

cərɑ̄'ptə mūr..n ən sʌvrcrʌvt
grated carrot an' saurkraut

əs ʌ'c noˑc (§ 411) ébəs [épəs] gūs
is eke (*auch*) yet something (*etwas*) good

docˑ ʌ'ct -n- ʌjǫ dʌtˑ crʌ¯ 'bʊj nʌvt
though regard I that quite (*gar*) as naught,

ən ɛsə hŏtsl mūs.
an' eat dried-fruit mush.

FRENCH.

614. *The following table shows the discrepancy* of opinion among the French, upon the value of their vowels when compared with English standards. The first column contains the French examples, and the others the words supposed to contain the English equivalents.

	Le Brethon,	*Bolmar,*	*Value,*	*Picot,*	*Pantoléon.*
patte	pat	fat	add	at	....
pâte	pall	arm	far	father	arm
bétte	bet	fate	gate	fate	ale
bête	bear	where	get	there	dare
hotte	hot	not	no, nor	nor, over	....
hôte	hope	more	nor	" "	old

615. *The older alphabets* are not worth quoting. In the Miscellaneous Works of Wm. Marsden, F. R. S., there is a paper On a Conventional Roman Alphabet, where á is pro-

posed for the English and French—fall, mâle; a—sad, far; ă—manner; e—It. vero, Ger. lesen, Fr. cher; ĕ—It. nello, Ger. bett; ê—Fr. près; î—Fr. long i; i—the same short; (a correct feature;) ĭ—sit, It. piccolo, Fr. quitter; ô—glow; o—motive, (a correct view;) ŏ—not, It. dotto; u—Ger. and Ital.; ŭ—but, "In high German it is denoted by ü in für."—au, out.

616. *The example following* is nearly a transliteration of that of Mr. Ellis (Univ. Writ., p. 21,) whose panethnic notation we consider the best among the several modes proposed by him, and which the want of type alone prevents us from quoting. He indicates long vowels by a repetition of their character, which makes the sign of quantity heterogeneous (now *o*, now *e*,) and too conspicuous; nevertheless his palaeotype admits of a high degree of minuteness.

617. *We use here the small capital* ɪ for the long sound, and the dotted i for the short one. The elided *e* is sometimes represented by two dots. The *e* of de, le, se, we write with the vowel of *up* (perhaps incorrectly,) and using (ʉ) for it. For convenience in printing, we use o for the long and o for the short sound, § 412. A period point before an initial indicates a capital letter—capitals, however, are no part of language.

618, 619.

Calypso ne pouvait se consoler du départ d'Ulysse. Dans sa douleur,
cʌ˘lipsō˘ n.. pʊɛs .s.. kŏ˛˘sō˘lĕ dy˘ dĕpʌ˘r d.. .y˘lis. dʌ˘ sʌ˘ dʊlʉr (432,)

elle se trouvait malheureuse d'être immortelle. Sa grotte ne résonnait plus de son chant:
ɛl sʌ˘ trʊɛs mʌ˘lʊ˘rʉ˘ə d ɐ tr imortɛl. sʌ grot˘ nʉ˘ rĕzō˘nɛ ply˘ d sŏ˛ rʌ˛˘:

les nymphes qui la servaient n'osaient lui parler. Elle se promenait souvent seule sur les
lɛ nɪ˛f ci lʌ sɛrɛs nɒɔɛ ly˘i pʌrlĕ. ɛl sʌ˘ promnɛ sʊɛʌ˛ sʉ˘l sy˘r lɛ

gazons fleuris dont un printemps eternel bordait son ile.... Tout-a-coup ell apperçut les
gʌ˘ ɜ o˛ flʉ˘ri dŏ˛t ʉ˛ prɪ˛˘tʌ˛˘ə ĕtɛrnɛl bō˘rdɛ sō˛n ɪl.... tʊt ʌ˘ cʊ ɛl ʌ˘pɛrsy˘ lɛ

débris d'un navire qui venait de faire naufrage, des bancs de rameurs mis en pièces, des
dĕbri˛ d ʉ˛˘ nʌ˘ɛɪr ci ɛnɛ d fɐr nō˘frʌ˘ʃ, dɛ bʌ˛˘ d rʌ˘mʉr miɜ ʌ˛˘ piĕs, de

rames écartées çà et là sur le sable, un gouvernail, un mât des cordages
rʌ˘mɜ ĕcʌ˘rte˘ sʌ˘ ĕ lʌ˘ sy˘r lʉ sʌ˘b˚l, ʉ˛ gʊɛrnʌ˘ily (1520) ˈa mʌ˘ dɛ cordʌ˘ʃ

flottant sur la côte
flō˘tʌ˛ sy˘r lʌ˘ cō˘t.

Translation, in French orthography, from two French Treatises on English.

620. Calypso koud not bi konfortĕd for thi dipartieur ov Youlysses. In heur grif shi filt [faound heurself] eunhappy éte (§ 378) biing immortal. Heur groto no longhĕr rizaoundĕd ouith heur song. Thi nymphs hou sêrvĕd hĕr dêrd not spik tou heur. Shi ofĕn ouâkt alône on the flâouri (§129) teurf, ouith houitch én iternal spring côverĕd heur âiland. . . . . On é seudděn shi persivd thi fraghménts of é véssél that had djeust binn

rékĕd, roĕrs béntchĕs brokĕn in pissĕs, ors skattĕrĕd hir énd thér on thi sand, é reudděr, é mast énd kordédje floting on thi shôre.—*P. Y. de Séprès.*

621. *The next is based on Rapp's* example (3, 141–2,) from Molière's Tartuffe, act 1, sc. 6, the orthography of the original being our own.

Instruit par son garçon qui dans tout l'imitait
ɪˌstryˇi paʀ soˌ gaʀsoˌ ci dAˌ tʊ limitɛ

et de son indigence et de ce qu'il était,
ĕ d soˌ ɪˌdijAˌs e dʊ s c il ĕtɛ,

je lui fesait des dons mais avec modestie
jʊ lyˇi fəɛ dɛ doˌ mɛ (ɪ 339) AɛɛC modɛsti

il me voulait toujours en rendre une partie.
il mʊ ʟʊlɛ tʊjur Aˌ rAˌdr yˇn paˇrtɪ.

c'est trop, me disait-il, c'est trop de la moitié,
s ɛ tro mʊ diɛɛt il, s ɛ tro d lA mʏAtiĕ,

je ne mérite pas de vous faire pitié.
jʊ n mĕrit paˇ dʊ ʟʊ fɛr pitiĕ

et quand je refusais de le vouloir reprendre,
e cAˌ jʊ rfyˇɛɛ dʊ l ʟʊlʏAr rprAˌdr

aux pauvres, à mes yeux, il allait le répandre.
oˇ poˇʀr, Aˇ mɛ jʊˇ il Alɛ lʊ rĕpAˌdr

enfin le ciel chez moi me le fit retirer
ɪˌfɪˌ lʊ sjɛl ʃeˇ mʏA mʊ l fi rtirē

et depuis ce tems là tout semble y prospérer.
ĕ dʊpyˇi s tAˌ lAˇ tʊ sAˌbl i prospĕrē.

622. *Both Rapp and Ellis* write French nasal *in* ·on the basis of the vowel of *ebb*, the Polish eˌ in pjɛˌto (five,) which is concurrent with ɪˌ ·in Wyandot. Here the practice of Mr. Ellis is based upon French opinion rather than upon his own ear, as he has informed us.

623. *Most of the succeeding examples* were taken before we had distinguished ə from ʊ, and the open u from the close ʊ, so that the one may often stand for the other.

CHEROKEE.

624. *The Lord's Prayer*, the native version. Read ɑ in *fall*, ɪ in *pit*, ʊ close and short, in *up*.

[1] ɲɑi·tɑtá	[2] călvˌlátɪˇ	[3] hehɪ́	[4] calvˌɑ̨ǫ̨ǒt̨jʊˌ́	[5] cɛsĕtɪ́	[6] tɛ·tsătnʊˌɪ́.
our-father	(in) heaven	who dwellst	honored	be	thy name,
[7] tsăcʊˌvɪjuhɪ́	[8] cɛsʊˌ́	[9] vɪˇcănănʊˇcɑɪ́.	[10] ăn̄ɪ́	[11] ĕlɲhɪ́	[12] vɪntcăˇlɪˌstá
thou-king	being	let-appear.	here		let be done

[12] hătănn̄tɛ·sɑʊˌɪ́
thy will

[14] năhsci·já [15] călu˛˘lătv [16] tsɪn˘că˘lɻsti·há. [17] nĭtătɪtu˘cvĭsu˛´ [18] ɲcă˘lɻstăɹ ᵾ˛tv
as it is (in) heaven done. daily our food

[19] scĭu˛·sv [20] ɔnhv [21] i·cá. [22] tĭcèscĭu˛˘sɪcvo·nɒ˛´ [23] te·scv·ču·cu·v [24] nahscījá [25] tsɪtícajɲ·tsīñnēhɑ˛,
give us this day. and forgive us our debts (14) as we forgive

[26] tsɲtsĭtucv, [27] alé [28] cle·stv [29] u˘tăcɒ˘lĭjᵉ tiju [30] vɪthscījătɪnu˛˙stanu˛˙ɔɪ,
those who owe us, and not in the way of trial lead us,

[31] sciju·talescestɪcvo·scɪnv [32] ʊjɲ [33] cɛsu˛·v. [34] tsu˘stsēlɪcăhjᵉ·nɒ´ [35] tsucu˛·vɪju·hv [36] cɛsu˛·v
but deliver us from (the) evil that is. for thine king (32) being.is

[37] tsă˘llĭni·cĭtv [38] ălé [39] cɛsu˛·v [40] e·tsulu˛·c˘vti·jʊ [41] ále [42] cɛsu˛· [43] nɪɔnhĭlu˛·v [44] născv
strong and the-being honored and the-being always so

[45] vɪntá˘lstá.
(13) let it be.

625. This is the pronunciation and rendering of the Rev. Stephen Foreman, a native. The final of [9], [33], &c. is *not* a coalescent. The accent in [3] may be erroneous—see [15]. The final of [37] is probably ɪ. It seems ([16], [44],) that flat **t**, **c**, do not associate with *s*.

626. The whispered vowel in [12], [16], [18], should probably be omitted as an error of the alphabet (§ 589,) as in No. [45]. The vowel ɐ in [19] is nasal, and whispered, being between surds. The final syllable of [22] means *and*, like Latin -QVE.

627. The final syllable of [30] would be omitted if not followed by a stop; and if [31] ended the sentence (the verb in the three last letters of [32] being implied, or given in another place,) it would have a final accented ɪ. This peculiarity appears in [39] and [42]. In [34] the final hjɛnɒ´ means *for;* and in [26] tsɲ means *those.*

628. We have taken but one liberty with our manuscript, namely, in making [24] correspond with [14] on the authority of the version in Gouraud. We had written [24] "naskijá," failing to catch the *h* heard in [14] (if it was sounded,) and also the flat sound of *cay*. At that period we used *k*, and a dot above for the short quantity, a good enough mode, but difficult to print.

WYANDOT (=VǾNDǾT.)

629. ***The Lord's Prayer,*** the notation the same as the preceding.

scvɐ˘>ìstɪ˛ [2] jăvò˛ɲɹ˛ă>ăjɛ [3] ɪχstàʋɛ>'; [4] tʊjé˛htɪ [5] de [6] ɾɛɾɛ̀ndă>'; [7] tu·tăvè
our father heaven.....in thou-inhabitest righteous thy name. let-it-come

[8] savò˛ɲjămɛh. [9] ăvătrìvajɾɪt' [10] dɛ [11] savìvɒ˘>' [12] o·mɛ̀tsă>ăjɛ [13] tiju˙htɪ [14] de
your heaven. let-it-be-accomplisht thy purpose earth.....on like-as ..

[15] jărò˛nɹ˛ă▷ăjɛ. [16] tăva·nó˛t [17] dă▷ătĕmé˛ntăjɛ [18] măcjă▷ătàn̤dit̤ăhcvɪ. [19] sʊsʊ▷ădl̥jŏ˛r˛h˛ɛ˛
heaven.....in. give-to-us every-day ... our-sustenance. forget-thou

[20] dɛ [21] sʊ·rɪ˛jʊ˛▷ăcŏ˛ndɪh [22] tɪjʊvá·rrĕhă▷ [23] dʊ [24] nɹ˛o˛·mʊ˛▷ʊ˘ [25] o˛·cɪrɪjʊ˛▷ăcŏ˛ndɪh.
... our breaking thy laws as we do our own law breakers.

[26] tăvŏ́hsă·rit [27] to˛▷o˛mʊ·h [28] dɪ [29] stɤ˛▷ʊ˛˘h [30] tă▷ătănɹo˛·mʊ˛˘ht·rà·tʊ˘t [31] dʊca·ʊ́ht,
lead us that way ... not to be beset (by) evil,

[32] ʊmɤ˛·h [33] dɛ [34] jărò˛nɹ˛ă▷ăjɛ [35] dɛ [36] ja·vɪ́hr·tă▷ʻ [37] tu·ndɪ́ [38] du ra·mɛ́▷ʻ.
thine ... (the) heaven and (the) power and-likewise the glory.

630. This version was composed in our presence (we writing it down) by the intelligent native chief of the Wyandots, J. M. Armstrong. Wyandot is an Iroquois language, and the three first words of the preceding version correspond with the four—

"Songwaniha ne karonghyàge tighsìderon,"

as given in the Mohawk 'Common Prayer,' London, 1787, p. 53. Zeisberger gives garochia as the word for *heaven*, in the Onondago dialect. No. [4, 8, 13], &c., have the common *h*. The *o* seems to be always nasal, and in number [12] it is probably erroneous.

631. The elements in the language are—i, ɪ, e, ɛ, ɤ, ʊ, a, ɔ, o˛ u, ʊ,—v, m, (no other labials,)—n, d, t, t, (no *l*,)—r smooth, s, (no *z*,) ɾ, ɟ,—j, ɢ, c, c, χ, h, ▷, besides nasal vowels. ʊ is used for a short sound without discriminating it from ŭ, (§623.)

632. ʊ▷ʊcjɛrɪ˘h˛ɛ˛ dʊ́▷ʊndă▷ʻ. ʊ́▷ʊndă▷ʻ ɟʊ́▷ʊɹ˛ɛ▷ʻ vɔ́tɤ˘ɹ˛ŏ˛ hʊ˘nda·rɛ́▷ʻ.
it is straight the-arrow. arrow. §486. ground-squirrel in-a-hole lives.

ɢjá▷ă·ră, Niagara, probably from ɕjá▷ăcŏ˛▷, broken. scʊ́▷ʊtă, head. cv·nɟʊ▷ʊtă, cicada. ɟʊ▷ʻ, pigeon. tsa▷andʊ˘scɛ, Sandusky (=at the waters.) ɤlɪcèsɪ, Allegany. ajndă▷ʻ, bow. hntɪ·rɔ́˛, rakoon. ɟɛntsó˛, fish. cvésɛ˛▷ʻ, fowl. hòtă▷ʻ, ear, which some may consider akin to *οὖς*, *ὠτός*. nɹ˛ɔ̤˛tɛ·rʊ▷ʻ, my friend.

NADACO.

633. *One of the peculiarities* of the Nadàco or 'An-a-dah-has' has been alluded to in §448. Another is the occurrence of the vowel u or ʊ, the Latin consonant v, and the allied coalescent ʻv; also, ɪ, ɪ, ɟ, ɟ. We heard a man call a finger-ring nacè˘sɛmbe˘-ca˘sɛ˘,* whilst his wife called it nacèsɛmbetrahasɛ, with an additional syllable *ha*. See the word for finger. The vowel of *add* occurs here, and a final vowel is often whispered, as in eight of the following examples.

* Although we use (ˊ) for short accented syllables, and (ˋ) for long ones, the accentual leaning towards the co-accented consonant, yet when we use (ˆ) together, as in this place, the syllable is to be considered as made of cè˘ and not of éˋs,—and éˋs might occur also.

dasòtọ *crown*
tróhŏtŏ, *hair*
tsăhătàu, *forehead*
tánɛădăus (not taʃ-) *cheek*
bɪrtu, *ear*
tsáha'v, *eye*
trăbèheta'v, *brow*
sŏŏ, *nose*
tămèsọ, *jaw*
ădètọ *tongue*
ătè˘tọ, *warm*
vácŏhŏ, *chin*
nătsèŏ, *neck*
bĕhĕdá'vsŏ, *shoulder*
nán=h, *clavicle*
co·r, *heart*
co·s, *breast*
tsòtŏ, *nipple*
s=ntò˘họ, *wrist*
sècŏ, *palm*
s=mbéto, *finger*
s=mbɪsàs, *thumb*
băsóhŏtŏ, *leg*
biŏcŏ, *knee*
năhătŏh, *ankle*
nʌ'sŏ, *foot*
năhcăhá'v, *sole*
năstsŏtŏ, *heel*
náuctŏ, *toe*
nátu, *woman*
tánăcus, *leech*
tʌ'năt', *gryllus*
ētrʌ't', *toad*
cáhsun, *coat*
cántăsŏ, *leggins*
cona'vtăʃcŏ, *hatchet*
nucĕcahăvă, *pipe*
năcímpɪ, *beads*
tápɛt', *fan*
vàɪ, *shoe*
sà˘ha'v, *house*
căntáibẹ, *mirror*
còcɛ, *water*
vàtɛt', *ground*
acò˘hŏtŏ, *cold*
hà˘hăt', *good.*

KANSA (=cɔn=ɔ.)

634. *The vowel* Y, French *u*, is found here, although very rare in the aboriginal languages of North America. In our examples we add (in parentheses) the Dacòta equivalents, but placing Riggs' diacrits *after* instead of over the letters, as g· (which is compared with ghain,) s', English *sh;* h·, 'a deep surd guttural;' c', Eng. *tsh;* z' Eng. *dzh; n*, as in English *sing*, and French *bon*, the two being confounded after eighteen years study by a number of missionaries. Probably both sounds occur, as in Kansa.

ear, nɛtá (nog·e)
eye, ɪrtátɛ˘ʃɛ˘ (is·tá)
brow, ɹrtáhɪrăbă (is·táh·e, *eye-ridge.*)
mouth, ìhă (i)
tongue, ɟéssɛ* (c·ez·í)
nose, pɑh* (póg·e)
nostril, pɑrʊ'rɛ (póg·e-oh·dó-ka, nose-hole.)
forehead, pĭèsɛsɛ (ité)
fan, ĭcīlăɟɛ (ic·ádu)
pipe, nŏnóbă (c·andúhupa, c·andí, tobacco.)
knife, mòhɛ (minná)
warm, mɛɹtjèa'v
leggins, hy˘ʃgă (hunská)
shirt, ɔscɔ́·scŏucɹdo.cudă (on-h·doh·da.)

* Pronounce each *s*, and the *h*

CHIPPEWAY. (ŏtrɪbvė, pl. otrɪbvėg.)

635. nɛ.nɛpàtrɪnɪcɛ`sv', the *mole,* being ɪnɪc for ŏnɪc, an arm, his arm (nɪnɪc my arm, cɪnɪc thy arm,) nɛpàtr, wrong, left, opposite; nɛ- its reduplication, for both arms; ɛ s v', a noun suffix of the animate gender. The mole then, in the view of a Chippeway, is the

animal with reversed arms, the right one being apparently on the left shoulder, because the palms, instead of facing each other, are exterior.

636. pᵹɪGŌGʊJì, the *horse*. For pᵹɪGOrGʊJI; from pᵹJɪ'G *one*, ŏrcʊ'J *hoof*, nail; the *single-hoofed*, or solidungular animal, this being its zoological characteristic, and one which very few Europeans would have observed. How few, for example, who have seen the gnu (=black,) and the camel, can tell whether the feet are solid or cleft. The Chippeways name an elephant, not from its trunk, but from its straight or columnar legs; and a sheep from its 'ugly hair,' the wool striking their attention unfavourably. In Bishop Baraga's Dictionary of the Otshipwe Language, Cincinnati, 1853, the word for *horse* (bebejiᵹoganji,) has an initial reduplication, like that for *mole*. In Choctaw, a horse is ɪ'sŏbă, from ɪ'sɪ *deer*, hʊ'lbă *resemblance*. In Nadaco, it is the Mexican Spanish că'bajŏ, which varies to cavàrʊ* (Eng. *w*, trilled r,) in Waco. Similarly, in Penobscot (here *t* for tʊc"v means *river*, compare Aroostook,) the English name with its article, appear as ʊ.hŏs; and aháhsʊ, and a buffalo as báblŏ.

637. mɪn (mīn, ɪ being used for ī,) huckleberry, pl. mɪnʊn, mɪᵹnèᵹs, thorn-apple, Datura stramonium; ᵹs, dimin. mɪnɪ' a round sore, mɪnɪ's an island, mɪrɪmɪ'n, apple, (great berry,) written *mishimin* by Baraga, mᵹtɪ'GvɑB, a bow, because difficult, (GvɑB,) to draw or bend; nɪn vɑb, nɪvɑb, I see; vɑbʊ/c, to-morrow (the time of being light,) vɪGɪvɑm, a *hut*, from sheltering, in Lᵹnāpᵹ—vɪcvŏm.

638. The *muskalonge* or great pike of the lakes, is in Chippeway mŏrcɪnō'Jᵹ, from mŏr- *great*, (compare Mich-igan, Missi-sippi,) cɪnō'Jᵹ, *pike*, and cɪnʊ'rcɪJì is any long-snouted animal, as a hog. Compare *pig* and *peak, pike*. vʊ'Jʊ'rc, muskrat, ʊJʊrcɪ', mud. afcɪbvŏcɑ'n, (place of artichokes,) Cheboygan, the orthography of which is French. mʊrcìG, swamp, whence Maskegon. mɪrɪ'-sɪbɪ' great river. atrɪtămō', the red squirrel, Sciurus hudsonius, because it descends trees head foremost. asʊ'nʊᵹGō, grey squirrel, that sticks fast, or close, (to a limb.)

639. *The polysynthetic structure* of the Vesperian languages is widely spread. In Aztec, according to Humboldt (Vues des Cordillères, p. 316,) a *kiss* is *tetennamiquiliztli*, and *pain* is *tetlayhiouiltiliztli*. Condamine (Pinkerton, xiv. 225) thus speaks of the *Tameos* of South America. "The language of this people is indescribably difficult, and their enunciation still more extraordinary than their language. They draw their breath in speaking in such a manner that the sound of scarcely one vowel can be distinguished. They have words which, to describe, and then but imperfectly, would require at least nine or ten syllables, though, as pronounced by them, they seem to consist of but three or four

* These forms are sufficiently like the West African Grèbo cóbósō (horse,) to suggest an identity of origin. But this is from cŏ (to die,) in this manner. The peculiarity of the white race in Africa is to *die* in a short time, hence cŏbŏ *dying kind*, is the word for a white man; sō is *lizard*, so that a horse is considered the 'white man's lizard

Poettarorincouroac, signifies the number *three* in this tongue: happily for those who have transactions with them, their arithmetic goes no farther."*

640. Pitchlin, the intelligent chief of the Choctaws, gave us the etymology of the Choctaw (=trɔ'tɔ†) word ɪɔ'nubɪ (iron-wood, Ostrya virginica.) It is for ɪɛ'nɐrtɐ,bɪ (with all the syllables short, the third with the secondary accent,) contracted from ɪɛnɐrɪrtɐbɪ, *that with which kill buffalo*, (as a club, arrow, &c.,) their bows being made of this wood. ɪɛ'nɐr *buffalo;* ɪrt *that with which;* ɐ'bɪ *kill.*

GREEK.

641. mɛ^nin á|ɛjdɐ ϑɛ|à pɛ|leiá|dɛ'o ăχi|lɛ^ŏs
ó'vlŏmɛ́|nɐn, hɛ'| mȳrí.. ă|χajôjs | álgɛ̈ ɛ́|ϑɛcɐ.—*Iliad*, I. 1, 2.

The next is from 1 *Corinthians* xiii. 1, 2, being the passage transliterated by Mr. Ellis. We preserve the accents, ϑ, and χ.

642. ɛă'n tâjs Glōssajs tôn anϑrō'pōn lălô càj tôn aγgɛlōn, ăgápɐn dɛ' mɛ' ɛ'χō, gɛ́gŏnă χalcŏ's ɐχôn, ɐ'cy'mbălŏn ălălásdŏn.—càj ɛă'n ɛ'χô pro'pɛtɐ'jăn, càj ɛjdô tă', mystɛ'riă pă'ntă, càj pâsăn tɐ'n gnôsin; càj ɛă'n ɛ'χō pâsăn tɐ'n pístin hō'stɐ ŏ'rɐ mɛϑistánɐjn, ăgápɐn dɛ mɛ ɛ'χō, ŏ'vϑɐn ɐjmi.

ITALIAN.

THE LORD'S PRAYER.‡

643. pàdrĕ nostrω̆ cĕ sèĭ nèĭ trĭɛ'lĭ, sìà santificàtω̆ ĭl nὼmĕ tùω̆, ʟɛ́ſgă ĭl rènyˌω̆ tùω̆; sìà fáttă lă ʟω̆lω̆ntá tùă cὼmę̆ ĭn trĭɛ'lω̆ cωsí ĭn tɛ́rră; dáttrĭ [give thou] oddjĭ ĭl nostrɑ pànĕ cvω̆tĭdĭànω̆, ɛ rĭméttĭ ă nὼĭ ĭ no'strĭ débĭtĭ sĭccὼme nὼĭ lĭ [for them, *accus.*] rĭmĕttĭâmω à no'strĭ dɛbĭtω'rĭ, ɛ nω̆n tr.. [us] ĭndúrrĕ ĭn tɛntătsĭὼnĕ mā líbĕrătrĭ [-trĭ, us] d.. ăl màlĕ. ɛ cωsí sìă. (*âmɐn.*)

LATIN.

THE LORD'S PRAYER.

644. pátĕr nòstĕr cvī ĕs ĭn còjlīs; sā/ctĭfĭcētŭr nòmĕn tŭū,. a·dvénĭăt règnū, tūū,. fĭăt vŏlùntās túă, sìcŭt ĭn còjlo, ĕt ĭn tèrrā. pànē, nòstrū, sŭpe·rsu·bstāntĭàlē, [cvōtĭdĭànū,] dā nòbīs hódiē. ĕt dīmìttĕ nòbīs dèbĭtă nòstră, sìcŭt ĕt nōs dīmìttĭmŭs dēbĭtòrĭbŭs nòstrīs.

* "The sounds of the 'Tinnè language can scarcely be expressed by the English alphabet, and several of them are absolutely unpronounceable by an Englishman. In my attempts to form a vocabulary, I had great difficulty in distinguishing several words from one another which had dissimilar sounds to the native ear, and were widely different in their signification. A Dog-rib or Athabascan appears, to one unaccustomed to hear the language, to be stuttering. [§ 551.] Some of the sounds must have a strong resemblance to the Hottentot cluck, and palatal and guttural syllables abound in the language. Vocabularies of this tongue cannot be greatly depended upon, as no two people will agree on the orthography."—*Richardson*, Arctic Searching Expedition, chap. xiii.

† This word cannot be spelt with the English alphabet, although every element is English, the vowel being that of *odd*, as in Kansa (=cɔ'nzɔ.)

‡ As pronounced by Mr. P. L. Rosteri, instructor in Italian at Florence.

ŏt nē nōs i·ndùcās ĭn tēntātĭònē,, sĕd lìbĕrā nōs ā málō. nā, túū, e·st règnū, ĕt i·mpérĭū,, ŏt mūgnĭfĭcèntĭă, ĭn sēmpĭtèrnō.—*Gouraud*, pl. 12.

645. *Our variations from the Latin text* are due to the inconsistencies of Latin orthography in the use of Q, M, U, X,—and E both as a coalescent and a vowel. In several cases we mark length 'by position,' where the vowel is naturally short, by (·). We omit the coalescent dots, and write aj, oj, for æ, œ.

VIRGIL.

646. *In the following example*, the first and fourth feet of the first line must have no accent, because the verse has the rhythm of time, the ear being informed by the accent of the fifth and sixth feet, that the measure is hexameter. Vūlnŭs, at the end of the third line, has its time made up by the consonant at the beginning of the next line, or by a comma point. Aeneid, I, 34, 35, 36, 220.

vĭcs	e	cōnspèct	u	sícu	laj	tell	ùris	in	àltu,		
scārce	wēre	thēy	frèe	frōm	sĭcĭ	lĭs	shōre	oùt	ĭn thĕ	high	sea
vèla	dá	bant	làjt	ı	et	spù	mās	sálĭs	àjre	ru	èbant—
sailĭng	ĭn	tō	white-	capt	wàves		thēir	métal	pàrtĭng	the	wàters,
cum	jùn..	ajtèr	nu^{m}	sèrv	ans	sub	pèctore		vùlnŭs—		
whēn	jù	no	àl	wāys	hòld	ing	hēr	woùnd	in	re	mèmbrance— . . . .
prajcípŭ	ē	pĭús		ajnè	ās	nū/c	àcrĭs	ŏ	ròntej—l. 220.		
now chiefly		the	pious		æne	as	the	fate of	the	active, &c.	

647. *The false 'hexameters'* of Southey, Longfellow, and others, together with our accentual music, crush the rhythmic sense which Latin verse should have fostered, and gives us the barbarous relish for the rhythm of noise which rustics exhibit when they think their step in the dance should be heard as well as seen and felt;—the dance (the ancient *chorus*) being the only rhythm of time we are acquainted with.

648. *The last Latin line*, therefore, strikes the modern ear as a five-foot measure of *English* amphibrachs—

now chíefly	the píous	enéas,	the fáte of	the áctive
oróntes	and álso	of ámyc	and ly'cus	bemóans him—

or like the next, in *English* dáctyls—the normal form as recognised in our music—

. . . . .					now
chíefly the	píous e	néas, the	fáte of the	áctive o-	
róntes and	álso of	ámyc and	lýcus	be	moans him.

GREBO (§ 351*a*.)

649. *The Lord's Prayer* is given here from the dictation of a native, the translation being furnished by the Right Reverend John Payne, Episcopal Missionary at Cavalla. Nasal and stopt vowels (§ 350) are very common. Vowels unmarked, as to quantity, are *short*, and especially so when stopt. We have probably not marked all the stopt vowels.

ā bùa mɒ̨˘ nu̧ nɛ dé ɹū, na̧' nɹ̨e'nɛ̨' bɛ cɲ'-ʃnɛ, nɹ̨ę̌'bo'
our Father thou he art there heaven, thy name let it have holiness, men

bŏ nú' mo̧' va' cɪ̨', mo̧' na̧' *ə̀rŏ' bɛ' nù̧ɛ-dé' cŭnɔ̀'' mɒ̨'
they must make thee their king, for thy mind (will) let it be-done-here world in

tɛnȩ́ o' nĭ-dé' nɛ̨ ɹù, hɹ̨ɹ̨ʋ̨ ămó̧ nɹ̨ɛ̨na̧ɹ̨ĕdŏ' né'no̧' ɛ'nɛ̨dìba'dé, nȩ
as they do-there it heaven, give us day this food, and

be' pó̧' ămó̧' hɹ̨vɹ̨ʋ̨'so'† co ā bonɛ̨ cúcvi' a ta tɛnȩ́ a nĭ̧'
do thou put us forgiveness for our conduct wicked its account as we do

ā pĕ nɹ̨o̧nó̧ o' nĭ̧' amó̧' bonɛ̨ cùcvi' mo̧' hɹ̨vɹ̨ʋ̨so'† ɹɪ; ne na̧
we put who-they they do us conduct wicked unto forgiveness also; and not

na̧ɛ̨ amó̧' túdo'tú' ā tĭdé ɹĭdí', ca' bɛ hā amó̧' cū ɹɛ',
lead us temptation its way in, but (you) must take us devil from,

ɛmó̧' mɒ̨' teɹé' cɪ̨' nɛ̨ mɒ vɛ'-tē-ɹé',‡ nĕ' mɒ mínɔ̨'' dɛ' bìɛ'
for thou art king and thou art-able-things, and thou shalt things all

ā nɹ̨ę̀nɛ cɔ̀'mo̧ tĭ bìɛ', *amɛn.*
their glory have time all.

650. *In the following examples*, when the languages are not noted by parentheses, as in (*Armenian*,) we have taken them directly from the dictation of natives.

* This *ə* is perhaps nearer to *ooze* than to *awe*, § 418. † The penult vowel is more open than *it*, or between this and *eight*. § 391*a*. ‡ to, things; j for.

NUMERALS.

651. *Islandic.*	652. *Danish.*	653. *English.*	654. *Saxon.*	655. *German.*
1 ɛjtn	1 ɪn, ẽn	1 vɐn, vɒn†	1 əjn	1 ʌjns
2 t'bɛ:jr	2 tū, to·	2 tū	2 t'bəj	2 ts'bʌj
3 ʔrɪr	3 trɪ, tr̃ĕ, -ɪ	3 ɔrɪ	3 drʌj	3 drʌj
4 fì̀ò̀rĭr	4 fìrə, fìr̃ɛ	4 fō̜ɹ	4 fə'jərə	4 fɪr
5 fɪm	5 fɛm	5 fʌjɛ	5 fə'j̈bə	5 fy̆nf
6 sɛ'cs	6 sɛcs	6 sɪcs	6 sɤsə	6 sɛcs
7 sɹʁ̄	7 sy̆ɛ, sɪɛ	7 sɛɛn	7 sɪ'bənə	7 sɪbən
8 á'vḥtă*	8 òtə, ótɛ	8 ĕt	8 áχtă	8 ʌ̆ĕt
9 nìʁ	9 nɪ, nĭ	9 nʌjn	9 nìχənə	9 nə̆jn
10 tìʁ.	10 tɪ, tĭ.	10 tɛn.	10 tʌjnə.	10 tsēn.

656. *German.* (Westerwald.)	657. *Flemish.*	658. *Belgian.*	659. *Valais.* (Leukerbad.)	660. *Valais.* (Sitten.)
1 ēns	1 ɪ̆ɛn	1 ēn	1 ʌjs	1 ajs
2 ts'bē	2 t'bìɛ	2 t'bē‡	2 ts'bej	2 ts'bej
3 trɛ	3 drʌj	3 drɪ	3 drɪ	3 trɪ
4 fĕjr	4 ɛɪr	4 fɪr	4 fìrɪ	4 fìrĭ
5 fɪmpf, fʁ̆nf	5 ɛʌjf	5 făjf	5 fìfɪ, fɪmfɪ	5 fùfĭ
6 sɛcs	6 sɛs	6 sɛs, sɛs	6 sɛ'crɪ	6 sɛ'crĭ§
7 sɪ'bə	7 səɛn	7 səɛɛn, səɛɛn	7 sɪ'pnɪ	7 sɪ'bnĭ
8 oćt (Germ.)	8 ać̀t	8 ać̀t	8 ɒχtɪ	8 aχtĭ‖
9 nɒj	9 neǵn	9 neǵsn	9 nìpɪ	9 nìnĭ
10 tsè̤nə.	10 tɪn.	10 tɪn.	10 tsàχnɪ.	10 tsʌ·χnĭ.

*The slight *h* was denied by the speaker.

† Pronunciation of Mr. Kean, Princesses' Theatre, London, 1859.

‡ As we have used different notations at different times, we are uncertain whether we used '*w*' in our manuscript of this example, with its German or English power, and two grammars leave the question unsettled. *Fraai* (handsome)=frɑ̃j̇; *uit* (out)=ɐj̇t; *uil* (owl)=ɐj̇l; *hui* (whey)=hɐj̇; *houw* (a cut)=hɒv̇; *hooi* (hay)=hōj̇. The Belgian *ui* we have heard in English; and in Swedish, nej (nay)=nɛj̇.

§ Feminine plural, sɛ'crə.

‖ Accusative singular, aχtv̇'ɛ.

661. *Suabian.* (Schwartzwald.)	662. *Suabian.* (Hohenzol. Hech.)	663. *Pennsylvania.*	664. *Russian.*	665. *Illyrian.*
[1] õ̩əs *	[1] o̩s	[1] ens, e̩ns	[1] ădu'n	[1] ɹɛ'dən
[2] ts'bōə	[2] ts'bōə	[2] ts'bē	[2] dʟă	[2] dʟŏ˘, dʟā
[3] trùĭ, trī	[3] trū	[3] trʌj	[3] trɪ	[3] trɪ
[4] fîrə, fîrɐ̩	[4] fîrɪ	[4] fɪr	[4] trɛtîrɛ	[4] trɛ'trɪ, trɛtîrĭ
[5] fʌj.f, -ə	[5] fʌj.fɪ	[5] fʊnf	[5] pjɛtj̆	[5] pēt, pɛt'
[6] sɛ'csə, 7 sìbə	[6] sɛ'csɪ	[6] sɛcs	[6] rɛstj̆	[6] rɛst
[7] sì'bənə, -ɐ̩	[7] sì'bənɪ	[7] sɪ'bə	[7] sj̆ɛm	[7] sɛ'dəm
[8] áχtə	[8] ɛ'χtɪ	[8] ɔ'ct	[8] ʟo'sj̆ɛm	[8] ŏ'səm
[9] nʌjnɐ̩	[9] nʌjnɪ	[9] nʌjn	[9] djéʟjătj̆	[9] dɛ'ʟɛt'
[10] tsenɐ̩.	[10] tsènɪ.	[10] tsèə.	[10] djésj̆atj̆.	[10] dɛ'sɛt'.

666. *Dalmatian.*	667. *French.*	668. *Savoy.*	669. *Savoy.*	670. *Valais* at Sion.
[1] ɹɛ'dăn	[1] ʁ̩˘	[1] õ̩	[1] ʁ˘n, y˘n	[1] o̩
[2] dʟā	[2] dʁ˘ § 430.	[2] dū	[2] dū	[2] dū
[3] trɪ	[3] tr'vʌ˘	[3] trē, trā	[3] trej	[3] trɛ
[4] trɛ'tĭrĭ	[4] cʌ˘t''r	[4] cʌ˘t	[4] càtro	[4] càtro
[5] pējt.	[5] sχ̩'c'	[5] rχ̩˘	[5] sĭ/c	[5] sχ̩
[6] rēs	[6] sĭs	[6] rɪ	[6] sējs	[6] sɪs
[7] sɛ'dăm	[7] sɛt' (sɛt')	[7] sʌ˘	[7] rɛt'	[7] săt'
[8] osăm	[8] y˘ɪ't	[8] vɪ	[8] vɪt	[8] vɛt
[9] déʟɛt	[9] nʁ˘f § 431.	[9] nʌ˘	[9] nū	[9] nū
[10] dɛ'ssɪ˘t.	[10] dĭs.	[10] dʌ˘.	[10] dɪs.	[10] djʊ.

* Compare Allemanic (Bodensee, Aarau,) hùət, *hat;* fùəs, *foot;* fliəgə, *to fly;* lùəgə, *to look;* lùəgt, *looked;* i'bəl, *evil.*

671. *Lyons.*	672. *Marseilles.* (Provensal.)	673. *Narbonne.*	674. *Bearnais,* (of Pau.)	675. *Spanish.*
[1] jōn	[1] ìəʃ, ɣuʃ	[1] yn, yən	[1] y˘n	[1] ùnŏ
[2] dū	[2] dos, dus	[2] dūs	[2] dy˘s	[2] dŏs
[3] trʌj	[3] trĕs	[3] trēs	[3] trĕs	[3] trĕs, tres
[4] càtro	[4] càtrɛ	[4] càtrɛ	[4] cvàtrɛ	[4] cvàtro
[5] ʔʌj	[5] sɪʃc, sɛʃ	[5] sĭɛʃc	[5] rɪʃc	[5] ʔɪʃco
[6] sʌɪ	[6] sìē	[6] sĭēs	[6] rēj	[6] sējs
[7] sʌ	[7] sɛt, sɛ	[7] sɛt	[7] sɛt	[7] sĭétĕ
[8] vɪ¯	[8] jy`ɛ, ɮuɛ´	[8] bɛjt	[8] vējt	[8] òtrŏ
[9] nu	[9] nō˙v, nō	[9] no˙v	[9] nā˙v	[9] nuéɮĕ, nuɛ`ɮɛ
[10] dʒu¯.	[10] dɻɛ`s, dɛs.	[10] dɛts, [12] dutsɛ.	[10] dɛts.	[10] díɛʔ.

676. *Catalonian.*	677. *Portuguese.*	678. *Wallachian.*	679. *Armenian.*	680. (*Armenian.*)
[1] ūn	[1] ū̩m	[1] ùnŭ	[1] mɛG	[1] mɪ
[2] dos	[2] dùɛr	[2] dój	[2] jɛr,GU′	[2] jérGu·
[3] trɛs	[3] trèr	[3] trej	[3] jɛrĭéc	[3] jéreɛ
[4] cvàtrɛ	[4] cvʌtrŏ	[4] pàtrŭ	[4] trʊŏrs, trvŏrs	[4] tɪŏ˘rs
[5] rís/cvɛ	[5] sɪ′ʃcŏ	[5] trĭntr	[5] hĭʃc	[5] hu˘ncˊ
[6] sɪs	[6] sɛjr	[6] rɛ̄sɛ	[6] ʻbjɛts, ɛ̄ɪsts	[6] ɮɛts
[7] sɛt	[7] sɛtɛ	[7] rɛ`ptɟɛ	[7] jòtən, -tn	[7] jótn
[8] bujt	[8] vìtŏ	[8] ŏptˊ	[8] ùtən, -tn	[8] ut, utn
[9] nō˙v	[9] n`oɮɛ	[9] novɛ	[9] ìnən	[9] ìnən
[10] dɛ˙v.	[10] dɛr.	[10] ɜɛ`trɛ.*	[10] dàsn.	[10] dɤ`sn.

*[11] ùnsprɛsɛtrɛ, where *spr* is for *super*.

681. *Turkish.*	682. *Hungarian.*	683. *Albanian.*	684. *Ellenic.*	685. *Arabic.*
[1] bĭr	[1] ɛdy̆	[1] nɹ̥ɣ̥	[1] ɛ`nă	[1] vʌhɛt,—d.
[2] ɣcí	[2] céttʜ¯	[2] dy̆	[2] ɑìŏ	[2] ɣ̊ɲʌjn
[3] y̆tr	[3] hàrom, o?	[3] trɛ̆	[3] trìă	[3] ʔʌ̆lʌ¯ʔʌ´t
[4] daĭrt	[4] nēdy̆	[4] cătr	[4] téɛărŭ, téɛɛrŭ	[4] ʌ̆rbʌ̆t
[5] bɛr	[5] ʉt	[5] pɛ̨s	[5] péndɛ	[5] ʿqʌ´mɛʌt †
[6] altɣ´	[6] hot	[6] djărt*	[6] écsɛ, écsĭ	[6] sĭttʌt
[7] ɹedì	[7] hejt	[7] ɾtăt*	[7] ɛptá	[7] sʌ´bt
[8] sɛcls	[8] nJŏlts	[8] tɛt	[8] óctŏ, octó, ostó	[8] ʔʌmʌ`nJʌt,*‡
[9] [illegible]s	[9] cìlɛnts	[9] năndᵗ	[9] ɛn`ɛ ă, ɛnJá	[9] tísʌ̆¯t
	[10] tɪɔ.	[10] ɑɛt.	[10] ɑɛ`că.	[10] ʌ´rrʌ̆t.

686. *Chaldee.*	687. *Syriac.*	688. *Coptic.**	689. *Welsh.*	690. *Irish.*
[1] hɑă	[1] hɑo	[1] ŭvàĭ	[1] ɩn, ɪn.	[1] hèʊn
[2] trɛn	[2] trɪn	[2] snà'v	[2] dŏj	[2] ḏō
[3] tlàʔă	[3] tlòʔŏ	[3] ɾɛmt	[3] trɪ	[3] ṯrɪ
[4] árbạ	[4] árbŏ	[4] ftòŭ	[4] pédvăr	[4] cɤ´hɤ̆r
[5] hámɾă	[5] hámɾŏ	[5] tìŭ	[5] pɪmp	[5] cùɪɢ, cūdȝ
[6] ɪ´ɾtă	[6] ɪɾtŏ	[6] sòŭ	[6] ʷvvē'c‡	[6] ɾē
[7] ɾàŭạ	[7] ɾàŭọ	[7] ɾɛɾf†	[7] sʌjɘ	[7] ɾɒ́ċt
[8] tmánJá	[8] tmánJŏ	[8] ɾmɪn	[8] vɩʔ	[8] ɒ́ċɘt
[9] tíɾă	[9] tu´ɾŏ	[9] ɒsɪt	[9] nʌ'v	[9] n̤ē
[10] ə´sră.	[10] ə´srŏ.	[10] mɛt.	[10] dēɢ.	[10] ḏɛ.

* This 'ɾ' is between *s* and *sh*. † 'ʌ' between ʌ, ɛ. ‡ Vulg. ɔəmʌnJɛ.

* Memphitic (jacobite,) pronounced by one having an Arabic vernacular. The fem. form of [1] is ùvĭ, of [2] snùtĭ (or *d*,) and of [9] psìtĭ.

† In our MS. this ɛ has the note "towards *a* in *fat*," which, if correct, will locate it between these sounds, and close the blank under ʌ in § 369.

‡ An initial 'ɔ is lost here.

691. (*Persian.**)	692. *Coordish.*	693. *Gudzhrât'hi.*	694. *Hindustani.*	695. *Bengali,* (Calcutta.)
[1] jɛc	[1] ȷɛc	[1] ɛc'†	[1] ɛc	[1] ɛc'
[2] dy˘	[2] du˘du´	[2] hɛ	[2] dū, dō	[2] do`ĭ
[3] ɛI	[3] ɪtsé, ɪ?	[3] tɛn	[3] tĭn	[3] tīn
[4] tráhar, trăr	[4] trār	[4] trăv,	[4] trār	[4] tràrĭ
[5] pɛntr	[5] pendȷ	[5] păntr	[5] pā¸tr	[5] pà¸tr
[6] rɛr	[6] rɛr	[6] trɛ˘	[6] trhov‡	[6] trɑ̃`ɛ §
[7] hɛft	[7] ḥăft	[7] sāt'	[7] sāt	[7] sāt
[8] hɛrt	[8] ḥăht	[8] āth	[8] āt	[8] āth
[9] nyχ	[9] năh	[9] nɛʟ, nɛ'vʟ	[9] no'v‡	[9] nɑ̃`ɛ §
[10] dɛχ.	[10] dăh.	[10] dɛs.	[10] dɛs.	[10] dor.

696. *Tamil.*	697. *Cherokee.*	698. *Creek.*	699. *Choctaw.*	700. *Iroquois.*
[1] vɛ´nɛ¸	[1] săcvó	[1] hɛ'mcɪn	[1] trɛ˘fɛ'	[1] ɛ'scɛ
[2] réndu	[2] tălɪ'	[2] hocòlɪn	[2] tucɪu'	[2] técɪn
[3] mònɛ¸	[3] tsɑɪ'	[3] tutsìnɪn	[3] tutrĭnɛ'	[3] háhsɛ
[4] nàly,* y?	[4] nɛ¸ ɑɪ'	[4] òstɪn	[4] urtó	[4] căjèl̆ĭ
[5] ándji	[5] hɪscɪ'	[5] tsáχɑrpɪn	[5] tɛ˘˚ʟlăpɪ'	[5] ɪɪsch (c'h)
[6] àrɪ˘	[6] sɑta·lɪ'	[6] pàcɪn	[6] hɛ˘năl̆ɪ'	[6] jàȷsch (c'h)
[7] ȷéry¯*	[7] cɛ` lcvōcɪ'	[7] cɑlăpàcɪn	[7] ɪ¸tuclɪ' (2)	[7] tsàtɛ
[8] ȷéty¯*	[8] tsɑnɛ·lɛ'	[8] trɪnăpàcɪn	[8] ɪ¸tutrɛ·ná (3)	[8] satècɪ¸
[9] vɔnbɛɑy¯*	[9] sɔne·lɛ'	[9] ɪstăpàcɪn	[9] trɛ˘ca·lɪ'	[9] jŏhtŏ¸
[10] páty¯*	[10] scɑhɪ'	[10] pàlɪn	[10] pɪco·lɪ'	[10] ɪjèl̆ĭ (1421)

* From the dictation of an Armenian. † ɛ towards ɪ. ‡ o towards ɛ. § The genuine ɑ in *fall*.
‖ This *y* seems to lie between y and ɪ.

701. *Wyandot.*	702. *Comanche.*	703. *Nadaco.*	704. *Waco.*	705. *Lenàpe.*
[1] scʊt	[1] sémmʊs	[1] vɪ′stsɪ	[1] trè˘ðs	[1] cvʊ′tɪ
[2] tendɪ′	[2] vhă	[2] bɪth (t'h)	[2] vɪtr	[2] níră
[3] rɛ˛·hc	[3] păhăχt‘	[3] dăhá·v	[3] ta·v˘	[3] nʊ˘χ˘ʊ′
[4] ndɔχc	[4] vɔ′·χtsʊχt‘	[4] dJévĕ	[4] tàcvɪtr	[4] nʌvá
[5] ụvɪ′ɪ	[5] mánʊcht‘ (c'h)	[5] dèsĕcăt‘	[5] tscvètɔ (I 490)	[5] pʌlènʊχ˘c‘
[6] uva·ɟ	[6] nă˘văχt‘	[6] dáʃcɪ	[6] cì·ăhʌɔ	[6] cvʊ·ta·r
[7] tsʊtɔ́vé > ‘	[7] tàtsʊχt‘	[7] bɪ′sɪch	[7] ciùă˘vɪtr	[7] nira·r
[8] tɛ́vé > ‘	[8] ná′bĕvɔχtsʊχt‘ (4)	[8] dá·vsɛc‘	[8] ciátă˘vh (see 3)	[8] χ˘a·r
[9] tró˛ > ‘	[9] sé·˛vɔnʊvʊhnʊt‘	[9] ívĕsɛc‘	[9] tsiʊscɪ′ntĕ	[9] pèrcu·/c‘
[10] ăsé˛h, sɛ˛h	[10] sé·˛vɔnʊ˛hʊt‘	[10] bɪnáJʊ	[10] cɪvɪŏvɔhɔɔ	[10] télʊn

705 *a.* (*Lenàpe.**)	706. *Chippeway.*	707. *Penobscot.*	708. (*Passamaquoddy.*)‡	709. *Potewàtemi.*
ngutti	[1] pɛJɪ′G, bɛJɪG	[1] pèsʊc	[1] nécʊt	[1] ngo·t
nischa	[2] nɪ˛J	[2] nɪr	[2] tàbʊ	[2] nɪ·r
nacha	[3] nɪsvɪ′	[3] nāhs	[3] sɪs	[3] nsvɛ
newo	[4] nɪvɪ′n	[4] jèʊh	[4] néŏ	[4] njè·ŏ
palenach	[5] nā˛nʊ˛′n	[5] pălènʊscʊ	[5] nʌn	[5] nrà·nʊn
guttasch	[6] ɪʃGŏdvʌsvɪ′	[6] nɛc˘vdʊ′s	[6] ca·màts	[6] nGŏtvà·tsŏ
nischasch	[7] nɪ˛Jvʌsvɪ′†	[7] tʊmbà˛v˛ʊs	[7] élŏìGʊ˘nʊc	[7] nŏvʊ′c
chasch	[8] nɪrvʌsvɪ′†	[8] nsā˛sʊc	[8] ŏGmʊ′ltrɛ	[8] svà·tso
peschkonk	[9] rɔ′vGʊsvɪ′, rɔʃ	[9] nōlɪví	[9] ɛscvŏnàdɛc	[9] ràcă
tellen	[10] mɪtāsvɪ′	[10] mdālá	[10] télʊn	[10] mɛtà·tsŏ.

* This is Zeisberger's version, taken in Pennsylvania in the last century; ours is from a resident of Texas. Zeisberger did not recognise the vowels of *up*, *at*, like those who first wrote English (§ 585, 587,) and when the Delawares have their men of letters, these may imitate the English orthoepists, by assuming that Zeisberger's spelling was strictly phonetic, and that it ought to influence modern speech.

† This resemblance is unusual. Baraga gives *seven* in Chippeway as *nijwasswi*, and *eight* as *nishwasswi*. Keating, in Long's Expedition, 1824, (whose vowels we transliterate,) gives seven ninjuassoe, (he knew the French nasals, so that *n* represents our nasal sign,) and eight nishwassu. *Six* is formed on *one*, (Lenàpe, &c.,) *seven* on *two*, and *eight* on *three*, with perhaps *over* or *beyond*, in respect to *five*.

‡ Dictated by a Penobscot. In Sakewi or sauk, *one* is stated to be 'nekotɛ.'

710. (*Shawanee.*)	711. *Kansa.*	712. (*Osage.**)	713. (*Eskimo.†*)	714. (*Cape Flattery.§*)
[1] nì·cŏtɪ	[1] miéćtsɛ	[1] mɪɤtr	[1] artlé̤c	[1] tsă̤c▸oak‘
[2] nì·svɪ	[2] no·bá	[2] nò·mbă	[2] marlúc	[2] ă̤cl̆
[3] n?vɪ	[3] diɑ̃·blɪ	[3] là·brɪ	[3] pɪʃă̤sút	[3] vē
[4] niè·vɪ	[4] tò·‘bă	[4] tò·bă	[4] sĭsɛmút	[4] bōh
[5] nià·lă̤ɴvɪ	[5] sɑ̃·tu̯	[5] sà·tă	[5] tɛtlɛmét	[5] rʊts
[6] nɪcŏtvɑ̃·?vɪ	[6] ráps̯	[6] rà·pɛ	[6] āfɛnɪc-marlúc (2)	[6] tsɛ↾pacl̆
[7] nisvà·?vɪ	[7] pè·ŏmɛ	[7] pĕ˘ŏmpvɒ, ò·mpă	[7] āfɛnɪc-pɪʃă̤sút (3)	[7] ácl̆pă̤
[8] n?vɑ̃·sɪc?vɪ	[8] pe·à·blɪ	[8] cì˘ā̤to·bă	[8] āfɛnɪc-sĭsɛmút (4)	[8] ă̤cl̆ɛ́sɛb
[9] trɑ·cà·t?vɪ	[9] rɑ̃ˌ·cɛ	[9] cɛre·brɛtrɛ ʃcjɛ	[9] cōlīālút	[9] sac̆ŏă̤sɛb**
[10] mɛtà·?vɪ.	[10] cɛdè·blɛ.	[10] cɛre·brɛ.	[10] cōlìt.	[10] kla↾ɒ̨.

715. (*Apáchɛ.§*)	716. (*Ipai.§*)	717. (*Yuma.§*)	718. (*Chinook.‖*)	719. *Chinese.¶*
[1] tą̇hlɛ	[1] sɪn	[1] sɛ́ntɪc	[1] ɪc̆t	[1] ɹɛt’ (§564)
[2] dacɪ	[2] hă̤vɛ’q‘	[2] ↾avɪc	[2] mă̤·vcst	[2] ɹɪ
[3] t↓hĕ	[3] χă̤móq‘	[3] ↾ă̤móq	[3] q↓q̇lōn (§551.)	[3] sʌ·m
[4] tɪ	[4] trɒɒp	[4] trɛ́ɛumpàpq‘	[4] lɤ˘cɛt (ɤ?)	[4] sɪ·
[5] àstlă̤	[5] sɛrɑ̃’p	[5] să̤·ràpt‘	[5] q↓q̇ɪ·nɛm	[5] ɾ
[6] kɯ’stən	[6] ↾ă̤mă̤hòq‘	[6] ↾ŏmɛ↾òq‘	[6] tɒ’ɛɛm	[6] lɛc’
[7] kɯ’stsɪdɪ	[7] pą̇kàj	[7] pà↾cĭɛ́q‘	[7] sɪ’nɛmmă̤·vcst(5,2)	[7] tsʌ˘t’
[8] sąpì	[8] trpōq‘	[8] sĭpòq‘	[8] stōc̆tcɪn	[8] pʌt’
[9] gŏstàj	[9] nɪmχă̤mòq‘	[9] ↾ámɪ↾ă̤mòq‘	[9] cvàjɪts	[9] cʌ·v
[10] kɯnìsnɑ̃.‡	[10] ră̤↾òq‘.	[10] să̤↾òq‘.	[10] tɒ’ɛlĭlɛm.	[10] ɔɛp’ §490.

* Properly vɛsàrɛ, here *nine* means ten-less-one, tr being a contraction of *one*, and ɪʃcjɛ=*less*. So in the Mpɒʃɑvē of West Africa, (as we have been informed by a French traveller,) *ten* is ìɑum, and *nine* is ɪnɒ̨ɑum= *not ten*. ** An accented *c*.

† Of Smith's Sound; dictated by Dr. Hayes, of Kane's Expedition. These differ somewhat from those given in Sir John Richardson's "Arctic Searching Expedition."

‡ [11] tlatsɯ’tą; [12] dákī-ɯ’tą; [13] t↓hɛs-ɯ’tą. ‖ Dictated by Dr. J. K. Townsend.

§ From the dictation of Dr. John L. Le Conte, who is more than usually accurate in observations of this kind.

¶ Of Canton (cvɒɑ̨to,·ɑ̨) the second in the dialect of Macao, where the abrupt *t* may not have been observed except in the one case. But in our notes, the breath is indicated as escaping in the word for six. In the Canton word for *four*, we marked the vowel as made with the jaw open and the lips close, which would indicate a kind of French *u* based on the vowel of *it*. In this notation we used a sign like ⌢ for *lips open*; ⌣ *lips close*; ⌴ *jaw open*; ⌐ *jaw close*; ⩡ lips closed and jaw open, &c.

720. *Chinese.*	721. *Malay.*†	722. (*Hawaian.*)	723. *Tonga.*‡	724. *Grebo.* (W. Africa.)
[1] ɹʌt	[1] sàtŭ	[1] ăcáhĭ	[1] tàhă	[1] dō
[2] ɹɪ	[2] dùvă	[2] ărùă	[2] ùa	[2] sn̩
[3] sʌ˘m	[3] fìgă	[3] ăcòrŭ	[3] tòlŭ	[3] tā̩
[4] sɪ·	[4] ámpăd	[4] ăhà	[4] fā	[4] hă̤
[5] m	[5] lìmă =	[5] ărìmă	[5] nìmă	[5] m, m̄m
[6] lʊc·	[6] ánăm	[6] ăònŏ	[6] ònŏ	[6] mlé̤dŏ (5, 1)
[7] tɾʌt’	[7] fŭɹŭt	[7] ăɔ̀tŏ	[7] fìtŭ	[7] mlɜsð̤́ (5, 2)
[8] pʌt	[8] dĭlàpăn	[8] ăvɔ̀́rŭ	[8] ɛàlŭ	[8] béhă̤,béhă̤ (4)
[9] cjʌ˘˙v	[9] sɛmbìlăm	[9] ăìɪă	[9] hìɛă	[9] sìědŏ
[10] sʌp.	[10] sáblăs.	[10] ūmī.	[10] hò/ŏfŭlŭ.	[10] pʊ˘.

† From the dictation of a Hollander speaking the language.

‡ In Wallis I. the same, except [1] tàhĭ, [2] lùă; in Fŭtùnă, the same, except [1] tásĭ, [2] lùă, [5] lìmă, [9] ìɪă, [10] càŭe/əfùlŭ.

CORRECTIONS AND ADDITIONS.

§ 181*a*. In some languages, *pb*, *td*, *cg*, are used indifferently, and as we employ (‘ ’) for sonant and surd, it may be necessary to have a *p*, *t*, *c*, *f*, or surmounted by (˘) to indicate this indifference. In Baraga's Otchipwe Dictionary, it is directed that words not found under *p*, *t*, *k*, are to be looked for under *b*, *d*, *g*, and the reverse.

§ 369, above ϵ Suab., ‘ϵ Coptic’ may be inserted.

§ 624, 12th word, the vowel after *l* is not nasal (as marked) but whispered.

§ 379, note. At Covent Garden Theatre we heard *pass*, *glass*, *man*, with the vowel of *fat* lengthened, and pâssed, flâunt, cân't. Mr. Kean, at the Princesses' Theatre, used the vowel of *fat* in *France*.

Whilst the foregoing pages show the extent to which the Latin and Greek alphabets may be used, they exhibit at the same time a number of undesirable forms, which may be avoided by selections from the various types (whether in use or rejected,) published in Mr. Isaac Pitman's Phonetic Journal, at Bath, England. The rejected letters amount to 110, of which about one-half are capitals. All of these are accessible in long primer, and most of them are in perfect harmony with the Roman alphabet. On the other hand, the letters of American origin are in the aggregate badly formed, and cut without taste or skill. The fact that our own illustrations have been taken from about *seventy* languages or dialects—of which a somewhat minute notation has been made—renders it obvious that the alphabet of any *single* language must require a much less complicated symbolisation.